VOL. IV. MAY, 1898. NO. 5.

THE LARYNGOSCOPE

A MONTHLY JOURNAL DEVOTED TO DISEASES OF THE NOSE - THROAT - EAR

EDITORS.

FRANK M. RUMBOLD, M.D. M. A. GOLDSTEIN, M.D.

ASSOCIATE EDITORS.

M. D. LEDERMAN, M.D.
New York.

W. SCHEPPEGRELL, M.D.
New Orleans.

S. SCOTT BISHOP, M.D.
Chicago.

F. B. EATON, M.D.
San Jose, Cal.

FOREIGN EDITOR.

DR. ST. CLAIR THOMSON, London, England.

FOREIGN COLLABORATORS.

J. DUNDAS GRANT, M.D., London; J. J. KIRK DUNCANSON, M.D., Edinburg; DR. VICTOR URBANTSCHITSCH, Vienna; DR. MARCEL NATIER, Paris; DR. J. K. KIMURA, Tokio; DR. G. STERLING RYERSON, Toronto; DR. FREDERICK SEMELEDER, Vera Cruz; DR. GOTTLIEB KICER, Copenhagen, Denmark; J. WATSON WILLIAMS, M. D., Bristol, Eng.

FOR CONTENTS SEE NEXT PAGE.

SUBSCRIPTION, $2.00 PER ANNUM, IN ADVANCE.

P. O. BOX 787. ST. LOUIS, MO.

OFFICE OF PUBLICATION, 3702 OLIVE STREET.
FOREIGN OFFICE: JOHN WRIGHT & CO., BRISTOL, ENG.

[Entered at the Post Office at St. Louis, Mo., as Second-Class Matter, in July, 1896.]

Official Organ American Laryngological, Rhinological and Otological Society, Southern Section.

Official Organ Western Otological, Laryngological and Rhinological Association.

Official Organ New York Academy of Medicine, Laryngological Section.

CONTENTS.

ORIGINAL COMMUNICATIONS.

The Aix-La-Chapelle Treatment of Syphilis of the Nose and Throat. By Anton Lieven, Aix-La-Chapelle, Germany 271
Rhinology, Laryngology and Otology in France. By Gordon King, M.D., New Orleans, La 276
The Determining Cause of the Site of Ulcers on the Nasal Septum. By E. C. Ellett, M.D., Memphis, Tenn 280
Foreign Body in the Left Nasal Cavity and Sequelæ. By Henry A. Beaudoux, M.D., Fargo, N. D 282
On the Use of Formaldehyde in Atrophic Rhinitis. By Geo. L. Richards, M.D., Fall River, Mass .. 283
A Case of Nasal Syphilis with Pressure Symptoms Simulating Meningitis. By Geo. L. Richards, M.D., Fall River, Mass 284
Nasal Fibromata, with Report of Cases. By Logan M. Crichton, M.D., Atlanta, Ga 286
A Discovery in the Physiology of the Ear. By W. F. Cole, M.D., Waco, Texas 291
Report of a Case of Severe Hemorrhage following Paracentesis of the Drum Membrane. By James F. McKernon, M.D., New York 299
Report of a Case of Cholesteotoma of the Mastoid Antrum. By Dr. S. L. Ledbetter, Birmingham, Ala 302
Asepsis in Otology and Laryngology. By A. B. McKee, M.D., San Francisco 304
Two Ear Cases and their Lesson. By James B. Taylor, M.D., Bloomington, Ill 305

NEW INSTRUMENTS.

New Curettes and an Instrument for the Reduction of Hypertrophy of the Posterior End of the Inferior Turbinated. By Lewis A. Coffin, M.D., New York. [ILLUSTRATED.] 309

EDITORIAL DEPARTMENT.

EDITORIAL.

Western Ophthalmological and Oto-Laryngologic Association 311

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE 313
Intubation in Diphtheria 313
Intubation for Acute Stenosis 318
Deviation of the Nasal Septum 321
Technique and Sequelæ of Operation for Naso-Pharyngeal Adenoids 330

MISCELLANEOUS.

Primary Lesion of Leprosy 281
A Micro-organism which behaves Morphologically and Tinctorially as the Tubercle Bacillus 285

BOOKS AND PAMPHLETS.

Books and Pamphlets Received 334

THE

LARYNGOSCOPE.

VOL. IV. ST. LOUIS, MO., MAY, 1898. No. 5.

ORIGINAL COMMUNICATIONS.

THE AIX-LA-CHAPELLE TREATMENT OF SYPHILIS OF THE NOSE AND THROAT.

BY ANTON LIEVEN, AIX-LA-CHAPELLE, GERMANY.
Translated by M. A. GOLDSTEIN, M.D., St. Louis.

In the January, 1898, issue of THE LARYNGOSCOPE, Dr. St. Clair Thomson advocates the treatment of tertiary syphilis of the nose and throat by mercurial inunctions. This system of treatment is of especial interest to me, because it brings to notice two generally recognized facts in Germany, and especially in Aix-la-Chapelle:

First.—That not only iodine, but also mercury, is indicated in tertiary syphilis of the upper respiratory tract.

Second.—That inunction is the best method for exhibiting the action of mercury.

St. Clair Thomson cites English authorities, who claim that mercury in the therapy of tertiary syphilis should not be independently considered. In Germany the opinion is prevalent that lasting results cannot be obtained without the use of mercury. We, therefore, follow up a vigorous therapy by iodides with mercurial treatment. In serious cases, however, where the life of the patient, or the matter of important functioning organs comes in consideration (cerebro-spinal syphilis), or where, in any cases of tertiary nasal syphilis, energetic measures are recommended for cosmetic reasons, I never hesitate to

promptly include a vigorous treatment by mercury, in addition to the administration of the iodides.

The importance of this combined treatment is indorsed by the most recent statistics. The appearances of tertiary syphilis, according to recent observers (Michelson, Lieven), emphasizes the fact that nasal syphilitic gummata are more frequently noticeable in the course of from one to three years after primary infection, and that tertiary syphilis of the upper respiratory tract is not always delayed for ten or more years after primary involvement, as formerly claimed.

The shorter the period between the primary infection and the tertiary manifestations, the more efficacious the action of the mercurial therapy.

There are exceptions, however, even to this rule, and instances have been very occasionally observed where the exclusive administration of iodides or of mercury in tertiary syphilis have been followed by negative results, even though every precaution had been taken to meet given conditions. It occasionally occurs that tertiary syphilitic ulcerations spread rapidly, and that gummatous neoplasms are disorganized when mercury alone is administered. To be on the safe side, then, it would be rational, in cases of this character, to combine the administration of the iodides with mercurial treatment.

I not only indorse the suggestions of St. Clair Thomson, that the administration of mercury in tertiary syphilis of the nose and throat is indispensable, but also share the opinion that the method by inunction is the most energetic measure to be adopted for the proper administration of mercury in these conditions. Stress should be laid, however, on the proper and carefully conducted method of making these inunctions.

Kaposi[1] states that the exhibition of mercury by inunction is the most reliable, rapid and complete method of exhibiting this drug. Joseph[2] indorses this opinion. Even Niesser[3], the active advocate of the injection method, indorses the efficacy of this treatment, in the following words:

"Some occasions may present themselves in which the method by inunction is to be preferred to all other forms of therapy."

The excellent results which have been obtained for some time past in Aix-la-Chapelle, in the treatment of syphilis, may be attributed to the vigorous and systematic application of mercurial inunctions. I take the liberty of submitting a brief résumé of the well-known Aix-la-Chapelle treatment:

1. Pathologie und Therapie der Syphilis. Stuttgart, 1891.
2. Lehrbuch der Haut und Geschlechtskr. Part II, p. 254.
3. Die Einreibungskur. Volkmann's Samml. Klin-Vortrage. No. 199, 1897, p. 1106.

The patient arises in the summer at seven o'clock, in the winter at eight o'clock; drinks several glasses of special spring water during a one-half hour promenade; one-half hour later he takes a sulphur bath (95° F.) of twenty minutes duration. In weak patients breakfast should precede the bath by about one and one-half hours. After the bath the patient rests for one-half hour; he is then ready for breakfast.

In vigorous patients I add the vapor bath to the above plan; this is an exceedingly active stimulant to tissue change. After breakfast the patient receives an inunction at the hands of an experienced rubber. Daily one of the following areas are subjected to the inunction: 1, both thighs; 2, both axillas; 3, breast and sides; 4, back; 5, both arms.

The patient is directed to wear woolen undergarments, which are to be changed only once weekly. The anointed areas are rubbed for twenty minutes, until the parts are almost dry. The patient should be instructed not to wash these areas when bathing. The skin is dried about these parts simply by pressure of the towel to absorb the moisture and thus avoid removing any of the salve. Only those parts which are to be anointed the following day are to be thoroughly washed.

The patient is instructed to rest one-half hour after lunch; then two or three hours exercise should be taken (promenades in the woods, bicycling, riding, tennis, etc.) About half-past five a draught of spring water (about 300 grammes) is taken. Dinner at seven o'clock. At half-past ten the patient retires. The sleeping apartment at all times should be thoroughly ventilated.

To avoid stomatitis, the patient is directed to cleanse his teeth with the following tooth powder, after each meal:

℞.—Salol	grms.	4.0
Resorcin	"	2.0
Pulv. irid. flor	"	40.0
Calc. carbon	"	8.0
Carmin	"	0.3
Ol. menth. pip	gtts.	10.

I also direct that the mouth be rinsed every half hour, with the following mouth-wash suggested by Dr. St. Clair Thomson:

℞.—Liquor. alumni. acetic	100
Aq. flor. aurant	300
Aq. dest	800

The patient carries this with him constantly in a flat bottle. If,

after these precautions are observed, there are still indications of stomatitis, the gums should be painted every two hours with tincture of myrrh. In spite of these precautions stomatitis may develop, and, as a rule, makes its appearance about the upper incisors and posterior area of the wisdom teeth, characterized by a detachment of the gums, with the formation of a white zone of demarcation. When this occurs it is not an indication, as is usually supposed, for the cessation of treatment. When such a condition presents itself, the following procedure is adopted:

With a small applicator, tufted lightly with cotton, the white deposit between the gums and teeth may be wiped away carefully, and the cleansed area pencilled with a seventy per cent solution of chromic acid. The chromic acid solution should not be allowed to diffuse in the mouth, and the patient should avoid swallowing for about twenty minutes. The day following such procedure the patient can usually masticate even hard food.

Moderate diarrhœa may be regulated by the following:

℞.—Decoct. colombo.....15.200
Tinct. opii.....gr. 1

M.—A tablespoonful every two hours.

A diet of oatmeal gruel, eggs and toast, is prescribed for twenty-four hours; also the drinking of tea without sugar, and claret.

Cases of severe mercurial poisoning are of very rare occurrence here. Patients who have exhibited poisoning symptoms at home or in sanitariums, after the administration of small quantities of mercury, have demonstrated their ability to undertake a six or eight weeks' course of treatment in Aix-la-Chapelle without the slightest sign of mercurialism.

I attribute this fact to the stimulation of the tissue-metamorphosis by the thermal baths, and the internal use of the sulphur water.

Secondly, the apparent cause of this successful course of treatment in Aix-la-Chapelle, where large quantities of mercury may be exhibited without bad effect, may be due to the favorable influence of the baths, which seem to diminish the toxic effects of mercury. The researches of Grabower[1] have established the fact that the influence of sulphur on mercury causes the conversion of large quantities of metallic mercury into HgS, and that this combination, by reacting in a milder and more constant manner, produces a powerful anti-syphilitic effect, as already mentioned. I combine with the course of treatment here described, for tertiary syphilis of the nose and throat, the internal administration of from two to six grammes

1. Arch. fur Dermatol. und Syph., Vol. 31, p. 187.

of potassium iodide daily. In anæmic patients I prescribe the iodide as follows:

℞—Kali iodat.....grms. 30
Ferr. citr. ammon..... " 4
Tinct. nuc. vomic..... " 8
Aq. dest..... " 30
Tinc. chin. q. s. ad..... " 120
M.S.—Two to four teaspoonfuls daily in water.

After the disappearance of the gummata and the healing of ulcerations, the iodide administration is discontinued. In my opinion, the iodides exert their influence only as resorption agents of the products of tertiary syphilis; the poison itself and the hypothetical bacteria can be influenced only by mercury.

As regards diet, I would add, that in the course of treatment prescribed at Aix-la-Chapelle, especial stress is laid on the administration of nourishing food. To build up the strength of the patient, no restrictions in diet are given, with the exception of sweets, strong salads and cheese. By this exclusion there is less predisposition to diarrhœa.

As to drinks, two to three glasses of Münchener beer or a half bottle of French claret are allowed in the evening. Alcoholic drinks are absolutely excluded.

In addition to the general therapy, careful attention to local treatment of the nose should be given; this is especially directed to the removal of the foul-smelling secretions, and also to the careful disinfection which follows the breaking down of the tissue in the nasal cavities.

The crusts are removed by sprays of thermal water or lifted out by the forceps. The coarse residue may be removed by the daily use of the Gottstein cotton tampon; this may be covered with a ten per cent europhen salve. The ulcerations are pencilled with a seventy-five per cent solution of chromic acid; this should be done under good illumination and by the use of the speculum. The same may be also applicable to the pharynx. In the larynx ten to twenty per cent solution should be used. Sequesters, after they have been loosened, may be surgically removed.

In conclusion, I desire to add, that Aix-la-Chapelle is properly equipped throughout the year for the treatment of tertiary syphilis of the upper respiratory tract.

RHINOLOGY, LARYNGOLOGY AND OTOLOGY IN FRANCE.

BY GORDON KING, M. D., NEW ORLEANS, LA.

In Bordeaux this clinic is sustained by the faculty of medicine as an important part of its clinical annex, but it is to the personal management, constant attention and untiring zeal of Professor Moure that it owes its prosperity and its many facilities, both for the care of the patients and for the instruction of students.

The course of official instruction of the faculty, in charge of Prof. Moure, is carried on during nine months of the year, and it is not only obligatory for the candidates for graduation to attend the courses, but they are now required to undergo an examination in otology, laryngology and rhinology before obtaining their diplomas.

Prof. Moure conducts his teaching in a decidedly practical manner, examining each case before the students and demonstrating the lesions by means of diagramatic sketches, at which he is more than an adept, and by the aid of anatomical preparations and crayon drawings—the work of his own hands. In the clinical work he is aided by his able assistant, Doctor A. Brindel, and four or five clinical assistants. The clinic is open five days in the week, from 9 a.m. to 12 m.; Mondays and Thursdays being devoted exclusively to laryngological cases, Tuesdays and Fridays to the ears and nose, and Saturday is operating day.

There is abundant clinical material and a most interesting variety of cases. An examination of the register shows the number of consultations from January 1st, of last year, to November 25th, inclusive, to be 8,685, of which number 5,124 were for the ear and nose, and 3,561 for the larynx. During the same period of time there were 2,556 new cases for the nose and ear and 850 for the larynx. A total of more than 582 operations were performed, including several mastoid operations, thyrotomies, radical operations upon the frontal and maxillary sinuses, adenotomies and many minor operations of the every-day clinical work, such as removal of septal spurs and nasal polypi, myringotomies, etc. Very strict attention is given to preserving asepsis of the instruments, not only in the operations, but also in the ordinary examination of the patients. Each patient, upon entering the consultation room, is given a plate containing a sterilized tongue depressor, ear and nose speculum, a laryngeal and post-nasal mirror and whatever other special instruments that may be

required for the examination of his case. After having been used, the instruments are returned to the sterilizer and prepared for another patient.

For ordinary purposes gas light is employed, and the patients, being seated with their backs to a long table, are examined each in his turn, according to the registration numbers. Constant use is also made of the electric head mirror for the intra-nasal or intra-laryngeal manipulations, operations, dressings, etc., and on the laryngeal days Prof. Moure employs, for the benefit of his students, a very strong arc light for direct illumination of the parts.

The supply of electricity for illumination, motors and cauteries, is obtained both from storage batteries and the street current. But little use is made of the electric drill in the operative work, preference being always given to the cutting forceps and guillotine knife for the removal of septal spurs, and the hand drill or gimlet for puncture of the maxillary sinus by the alveolar process. Vibratory massage, however, in laryngeal paralysis and in the treatment of atrophic rhinitis, is accomplished by means of the electric motor. Removal of hypertrophied faucial tonsils is done, usually, with the electric hot snare, less frequently with biting forceps, and rarely with the cutting tonsillotomes.

Their method of operating adenoid vegetations differs but little from our own, except that the curette alone is used and anæsthesia is but rarely considered necessary. When the little patients are particularly noisy and unruly, a few whiffs of bromide of ethyl are sometimes given.

Intra-nasal injections of boric acid solution are made before and after the passage of the curette; in the first place to cleanse the parts, and in the second place to check the hemorrhage.

Their treatment of suppurative otitis deserves special mention, as these cases are given most careful attention and the results obtained have been of a nature quite encouraging, if not satisfactory. Without considering those cases wherein radical measures are at once indicated by immediate danger or evidence of serious complication, I may say that the following are the lines of treatment habitually adopted in chronic middle-ear suppurations:

The condition of the middle ear having been ascertained by examination, the parts are thoroughly cleansed and the meatus packed with iodoform gauze. Injections are no longer employed, unless the discharge is excessively abundant, and the dry dressing of iodoform powder and gauze is renewed three or four times a week, care being taken to prevent any further infection from the outside. If, at the

end of two or three weeks, this regime does not bring about a cessation of the discharge, or a marked improvement, ablation of the ossicles and curettage of the cavity is resorted to, and the dry dressing continued as before. This has been found to suffice in many cases where the diseased process was confined to the drum cavity alone, but when sufficient time has been given for the discharge to cease and it still continues radical, surgical interference is considered necessary. The operation performed by Prof. Moure in these cases is a modification of the classical Stacke's operation. It consists in opening largely the mastoid antrum and cells and putting them in free communication with the drum cavity; curettage of the diseased parts; immediate closure of the wound, and the application of the dressings by the meatus. Ablation of the ossicles has been tried in a series of cases of dry middle-ear catarrh, with favorable results, but this treatment is not adopted in all cases. The hearing is tested in all cases for the ear and record kept of the improvement or progressive failure of the hearing throughout the course of treatment.

On the laryngeal days there is an average of forty consultations, and during the past six months I have seen a most interesting panorama of laryngeal affections. Laryngeal tuberculosis, of which there are no scarcity of cases, is treated by local applications of carbolized glycerine in solutions of from four per cent to ten per cent, followed by insufflation of iodoform. Where fungus, granulations or considerable localized infiltration exist, the fungoid masses or a part of the diseased mucosa is removed, the laryngeal biting forceps being used in preference to the curette. The lactic acid treatment is not employed in the clinic. Intra-tracheal injections of mentholized or creosoted oil are occasionally practiced in these cases. For small tumors of the larynx and vocal cords the endo-laryngeal operations are usually attempted, but in difficult cases thyrotomy is very frequently performed. The clinic records show some very favorable results indeed in these cases where thyrotomy was resorted to.

A most interesting class of cases that the student has occasion to observe in considerable numbers in the clinic is that of the laryngeal affections of singers, street criers, teachers and persons whose vocations necessitate constant use and often strain of the voice.

Prof. Moure gives his special attention to this class of cases, and his very instructive remarks on the subject of their management and care would be well worthy of reproduction in book form. The treatment usually advised consists of complete repose of the singing voice and avoidance of any vocal strain, combined with light applications of chloride of zinc solutions, insufflation of an astringent powder,

such as saccharated alum, and where there is evidence of weakness or paresis in the laryngeal muscles, vibratory massage is employed.

Time will not permit of a more lengthy sketch of this interesting clinic, but from this incomplete account some conclusions may be drawn as to the methods generally adopted in the treatment of the more important and frequent class of cases and the general principles upon which the clinical work is conducted. I may add that special records are kept of all the important cases and microscopical examination made of all morbid growths, tissues and secretions to aid in the more complete diagnosis of the cases. The armamentarium is one of the special features of the clinic. It is decidedly modern and complete, containing, besides the ordinary instruments required for the examination of the patients, a very valuable collection of special surgical instruments and materials, to which is added each year a new supply, selected by Prof. Moure in his annual tour of the European clinics.

In addition to this is a cabinet of very fine anatomical preparations in which are shown, by different sections, the relations of the bony parts of the middle and internal ear, the nasal fossæ, accessory cavities, etc. These specimens afford admirable opportunities for the study of this special branch of anatomy. The clinical apartments, consisting of a large consultation room, a reception room for the patients, and a vestry and instrument room, are comfortable, well arranged and cleanly kept, but rather too small for the needs of the clinic. In the consultation and vestry rooms are found, garnishing the walls, quite a varied collection of anatomical drawings, engravings, photographic views of clinics and hospitals, and portraits of specialist celebrities. Thus, besides the large amount of clinical material, the student is surrounded on all sides by facilities for studying this special branch of medicine. No special course is given, as in the clinics of Vienna and Berlin, but students are treated with great hospitality and are given free access to the clinic.

The number and variety of cases, the well-established principles of diagnosis and treatment, and the wide range of facilities for the diagnosis and observation of cases, offer to the student such advantages as, I dare say, are to be found in few of the special clinics in Europe.

THE DETERMINING CAUSE OF THE SITE OF ULCERS ON THE NASAL SEPTUM.

BY E. C. ELLETT, M.D.

Oculist and Aurist to St. Joseph's Hospital, and to the Children's Home, Memphis, Tenn.

The majority of cases of bleeding from the nose which have fallen under my observation have presented a lesion, in the shape of an erosion or ulceration, on the nasal septum, at the lower border of the quadrilateral cartilage, at, or just above, its junction with the floor of the nasal fossa, and just within the vestibule. From the fact that I seldom see this sort of lesion elsewhere, and from the fact that the mention of similar lesions in this location is common in rhinologic literature, it follows that there must be some special reason why ulceration should develop so frequently in this exact spot. The "benign" perforating ulcers of the septum have this same point of departure. The cases of this sort, which represent the maximum extent of the process of which a pin-head sized erosion is the minimum, present an opening of varying size, but usually of the diameter of 10 m.m., in the anterior portion of the cartilaginous septum close to the nasal floor. Ulcers in any other locality are accidental, but it is the cause which determines the location of these lesions of which I propose to speak.

In the *Ophthalmic Record* for October, 1893 (old series) is an article by Raugè, which I translated from the *Revue de Laryngologie*, etc., for August 1, 1893, on "Microscopical Researches on the Organ of Jacobson." The description given is quite complete of an organ not mentioned in most works, and barely mentioned in Morris' excellent "Anatomy." This organ is quite well developed in some of the lower animals especially the ruminants and rodents. "It presents itself under the form of a cartilaginous tube, enclosing a cylindrical fibrous sac, and extending on each side of the septum, to the surfaces of which it is closely applied. Immediately below the inferior border of the quadrilateral cartilage, to which it seems attached, these two canals run parallel, in an antero-posterior direction, a little above the angle which unites the floor of the nose to the septum, and resembles the two barrels of a gun, separated in the median line by the bony plate of the vomer."

For a more extended description, I refer to the original article or to the translation. It serves my present purpose to thus roughly

locate this little known structure, and to add that it is rudimentary in man, and usually indicated by a slight depression of the surface of the lower anterior portion of the nasal septum.

Functionally inactive organs are prone to degenerate. The vermiform appendix is a striking example of this, its only manifestation of activity being when it becomes the seat of a pathological process. The faucial tonsils are in the same category. Research has so far failed to attribute to them any physiological *raison d' être*, and they furnish a fertile field for morbid processes and ambitious surgeons. The intermaxillary bone serves only to produce deformity by abnormal development. The proneness of other structures, more useful in their right place, to cause mischief when out of place, is instanced by the frequency with which morbid growths and degenerations develop in undescended testes.

Analogous to these processes are the septal ulcers which occur at the site of the rudimentary organ of Jacobson. Nothing else will explain their predilection for this exact spot, and the conclusion is certainly justified by pathological analogy.

Primary Lesion of Leprosy. (*Phila. Med. Jour.*, Jan. 8, 1898.)

Dr. Sticker (Giessen) examined 400 lepers in India and Egypt during May and June, 1897, for leprosy bacilli in various secretions and excretions. He believes that the initial lesion of this disease consists of a specific lesion of the mucous membrane, usually in the form of an ulcer above the cartilaginous part of the nasal septum. This primary lesion may, during the progress of the disease, develop into every form of chronic rhinitis, with ozena and necrosis of the nasal structures. It is *often present in the latent stage of leprosy years before the appearance of the first tubercles in the skin or the development of the first nervous symptoms.* In an examination of 153 lepers, the presence of bacilli in the nasal secretion was observed 128 times. The author claims that the primary lesion in the nose remains an active center of infection throughout the course of the disease, as the bacilli are being constantly thrown off in great numbers in the nasal secretion, consequently this secretion is the chief source of danger. LEDERMAN.

FOREIGN BODY IN THE LEFT NASAL CAVITY AND SEQUELÆ.

BY HENRY A. BEAUDOUX, M.D., FARGO, N. D.

November 19, 1897, Helen N., aged six, was brought to my office by her mother, who, at the time, was under my treatment for opacity of the vitreous, with the request that I should examine Helen's nose to discover the cause of the fetid odor which had for some time existed in that region.

Externally there seemed to be little change from the normal, with this exception: there was some excoriation of the left ala and upper lip on that side, with a certain amount of muco-purulent discharge.

On examination of the anterior nares I found a large amount of semi-consistent debris of a grayish-green color, mixed with hard lumps, which proved to be calcareous in character upon further examination.

After removing a large amount with the forceps a fenestrated curette was used to complete the process. Everything yielded to the curettage, so much so that I found my way through the septum without using the slightest amount of force. The anterior two-thirds of the inferior turbinal disappeared under the curette. Up to this time there was no hemorrhage of any account. I proceeded to complete the cleansing of the cavity, keeping in mind the possibility of finding a foreign body. Using the same precaution as heretofore, while working on the outer wall, I found my way into the antrum, and proceeded to break down its inner wall, which fell like the inferior turbinal had, upon the slightest touch of my curette. Seiler's solution was then used, followed by a four per cent. cocaine solution, and the search continued. I had now an opening into the antrum large enough to pass a small hazel nut. With a bent probe I soon discovered a foreign body in the antrum, of stony hardness, which, upon removal, proved to be a shoe button covered with a thick, hard, calcareous envelope. How long it had been there no one knows, as the child refused to tell when she had pushed it up her nose.

Queer to say, upon transilluminating the antri, no disturbance could be detected, nor did the child complain of any pain in that region.

Antiseptic and stimulating treatment was begun, after removal of all necrosed and offensive material, resulting in the closing of the

naso-antrum orifice. When I saw the patient last, the septum perforation was present and will probably never close, the anterior two-thirds of the inferior turbinal being entirely gone. The patient, after two months treatment, is free from the nauseating odor which existed at the time of the operation, and apparently none the worse for the defective nasal anatomy above mentioned.

ON THE USE OF FORMALDEHYDE IN ATROPHIC RHINITIS.

BY GEO. L. RICHARDS, M.D., FALL RIVER, MASS.

Otologist and Laryngologist to the Fall River and Emergency Hospitals.

I offer the following brief note as a contribution to the therapeutics of atrophic rhinitis, believing that anything in the way of an addition to our armamentarium in this disease will be welcomed. Remedies innumerable have been and are being tried with more or less success. There is no specific, and, up to the present time, the treatment can be formulated in a few words. Cleanliness and stimulant applications, to promote a freer and thinner secretion, has been about all that we have been able to accomplish.

Observing the powerful germicidal properties of aqueous solutions of formaldehyde, it occurred to me to try what effect it would have when used in atrophic rhinitis; not to displace any treatment which might be in use, but as an adjunct, for I have not myself used it alone to the exclusion of other remedies. I have used it as follows: After removal of all the crusts and debris with a weak alkaline solution, by means of a syringe and cotton applicators, I have then washed out each nostril thoroughly with a solution of formaldehyde, containing about five to ten drops of the forty per cent solution to eight ounces of warm water. As it is very irritating, even in dilute solutions, a preliminary spraying of the nose with cocaine is advisable. It produces always a sense of smarting throughout all of the nasal mucous membrane with which it comes in contact, lasting, however, but a short time. At home I have one drop added to the solution, which the patient uses in the douche cup for the daily cleansing. Under its use the crusts diminish in number and all unpleasant odor ceases. This is reported as a preliminary note, with the hope that others will try the remedy and report on the same.

A CASE OF NASAL SYPHILIS WITH PRESSURE SYMPTOMS SIMULATING MENINGITIS.

BY GEO. L. RICHARDS, M.D., FALL RIVER, MASS.

Otologist and Laryngologist, Fall River and Emergency Hospitals.

The following case is of interest, as showing the need of always being on the lookout for syphilis, especially where the disease fails to respond to what is apparently the appropriate treatment. T. E. K., thirty-two, barber, in apparently good health, consulted his physician, with symptoms of obstruction in the right nostril, complaining at the same time of headache. The history was one of trouble with the nose of four or five months' standing, and headache of two to three months, gradually increasing in severity. A little tissue was removed from the right nostril without any relief to either obstruction or headache. The advice of another physician was sought, who prescribed for his headache and sent him to me for his nose. At his first visit I removed a large amount of granular hypertrophy from the posterior end of the inferior turbinal, and subsequently from the anterior end, the right nostril being filled with this granular hypertrophy when I first saw him. Although these two operations cleaned out the nose so that he could breathe without trouble, he complained more than ever of the headache, which he said was intense and constant, not being in the least helped by medicine. He began to have a haggard appearance. On his next visit I discovered, with the probe, dead bone in the anterior ethmoid cells of the right side. The curette was used, and considerable cheesy pus, with spiculæ of dead bone, removed. Up to this time I had not suspected syphilis, but careful questioning at this visit revealed the fact that he had had an initial lesion seven or eight years before, the fact of which he had almost forgotten. The headache was now very intense and he had all the signs of pressure on the brain from some cause. As the curetting under cocaine had been very painful and had evidently been insufficient, he was given ether, and all the carious bone in the right nostril and anterior ethmoid cells of that side removed, and the whole upper meatus thoroughly curetted, so thoroughly that I was a little afraid that I had gone too far and possibly injured the roof of the nasal cavity and cribriform plate. On the contrary, no harm was done; the headache was in a few hours relieved and in a day or so was gone. The syphilis was appropriately treated from the moment

that it was discovered. The region curetted discharged for a week or so, at the end of which time no dead bone could be felt. This case had all the appearances of going on to a general meningitis and without the timely curetting would probably have ended fatally.

Examined two and one-half years later. There has been no recurrence of trouble, though, as he says, that he did not continue the antisyphilitic treatment after he felt all right. I do not believe the syphilitic poison is wholly eradicated, especially so, as he owns up to an occasional headache, not at all, however, of the severe type referred to here. It is, therefore, in the line of possibility and, perhaps, probability, that the disease will break out again somewhere at some future date. Syphilis is so protean in its manifestations that the possibility of its being a factor in the individual case must never be lost sight of. In my opinion it is a disease which is very seldom cured, because with the subsidence of acute symptoms the treatment is discontinued.

A Micro-organism which Behaves Morphologically and Tinctorially as the Tubercle Bacillus.

Dr. Alfred Moeller (*Deutsche Medizinal Zeitung*, Feb. 17) has added a very interesting—it may be a very important—contribution to bacteriology. He finds in timothy grass, and in the feces of many animals, a germ which, so far as its staining reaction and its form are concerned, seems to be identical with the tubercle germ. He says that if some timothy is placed with sterilized water in rubber-capped test tubes and these placed in an incubator for eight to fourteen days, one will find on staining, at least in many of the tubes, this germ. He has also found it in the dung of many cattle, horses, sheep, swine, and mules. (The cattle were all proved by tuberculin to be free from tuberculosis.) As a rule the germs are scarce in the dung. The germ grows on the same culture media on which the tubercle germ develops, but will not grow in either sterilized or non-sterilized milk. It grows at room temperature, as well as in the incubator. Whether this is the genuine tubercle germ, or merely a germ that happens to have the same physical properties, remains to be shown. Moeller promises in a future communication to describe its development in relation to Koch's tubercle bacillus, its pathogenesis, etc.—*Medicine*.

NASAL FIBROMATA, WITH REPORT OF CASES.*

BY LOGAN M. CRICHTON, M.D., ATLANTA, GA.

Professor of Laryngology and Rhinology in the Southern Medical College.

Fibroid tumors in several locations of the body are, of course, extremely common, as, in the uterus; again, a large number of fibromata of the pharynx are reported.

In looking over the literature I find pure fibrous tumors of the nose quite rare. I also find that they have not received the attention which I think their importance demands, the difficulties and dangers of diagnosis and operation not dwelt on sufficiently, the young specialist not warned to be careful in attacking these cases. In several works, which should be exhaustive, from one-quarter to one-half page only is devoted to the entire subject, while mucous polypi, having no element of danger, are treated of at length.

I find some fifty odd cases reported, dating back to 1832; since then case after case has been added to the list. I am somewhat inclined to doubt the accuracy of some of these earlier diagnoses, as nasal surgery was then, as it were, in its infancy, and the methods of examination and diagnosis were rather crude. Be this as it may, we have cases reported all along the line by Senn, König, Lincoln, Langenbeck, Mott, Gerdy, Syme, Verhæghe, Gomez, Pepinster, Fisher, Van Domelin, Gay, Mougins, Dickson, Maisonneuve, Hodgen, Steiner, Hitchcock, Chattellier, Seiler, Villar, Ingals, Jarvis, McKenzie and others.

The exciting causes are admitted to be trauma and irritation; the indirect cause, the excessive functional activity of the nose and the connective tissue changes which the nasal mucous membrane undergoes. We find these tumors during the younger period of life, oftener in the male than in the female; both of my cases occurring in young men aged respectively eighteen and nineteen years.

Unilateral stenosis is usually the first symptom which the patient complains of; this, of course, comes on quite gradually, as the growth of the fibroid is slow. The discharge in both my cases was peculiar, and I am forced to think characteristic, although I find no description of such a discharge in the literature of the subject. In both of my cases it was a whitish, opaque, glistening and markedly granular substance, collecting around the tumor. I have never seen such a dis-

*Read at the meeting of the Southern Section. American Laryngological, Rhinological and Otological Society, in Atlanta, Ga., March 28, 1898.

charge except in these two cases of nasal fibromata. Later the discharge has mixed with it blood and possibly some broken-down tissue, due either to erosions on the tumor itself, or of the surrounding mucous membrane. Epistaxis is considered by some observers absolutely inseparable from these fibroid growths. This is not, however, my experience; one of my cases gave chronic nose-bleed as one of his main symptoms, while the other gave no history of epistaxis whatever.

Headache or neuralgia is almost invariable after the fibroid has reached any size. These will vary according to the location of the growth. One of my patients complained of occipital and frontal headache—the tumor was located toward the posterior nares; the other of violent supra and infra-orbital neuralgia—the fibroid was located in the middle two-thirds of the nasal chamber.

Observers give other symptoms, due to pressure effects, as exophthalmus, spreading of the bones of the nose (frog face), etc. None of these were present in my cases, on account of the comparatively small size of the tumors.

Dolbeau claims that unilateral stenosis characterizes naso-pharyngeal tumors, and seems to lay considerable stress on this point. I agree with Bosworth, in taking an entirely opposite view. With the perfect illumination we can give the nasal chambers and the upper pharynx, and the invaluable aid which cocaine renders us, the diagnosis of these tumors is made, provisionally, without great difficulty and with considerable accuracy. I say provisionally, advisedly, because I always have some doubts of a diagnosis which is not backed up by the microscopic examination of the tumor. The growth is described as "irregularly rounded or lobulated, smooth and glistening in appearance, and presents a decidedly reddish-pink color. In some cases the blood vessels can be recognized coursing near the surface by the whitish background of which the tumor is composed." This description answers excellently for one of my cases, but would not for the second. Both of my tumors had very broad pedicles, and were not easily movable; hard and resisting to the impact of the probe, one bleeding readily when manipulated. All observers state that the growth adapts itself, to a certain extent, to the shape of the cavity in which it is confined, extending most where there is the least resistance, but growing in all directions without regard to the surrounding structures. I noticed this in my cases, although only to a limited extent.

It is conceded, I believe, that fibroids spring more often from the ethmoid; cases are reported coming from the floor of the nose, also

from the septum; one of mine came from the septum, the other seemingly from the ethmoid.

Tumors to be excluded in differential diagnosis are, osteoma, chondroma, sarcoma, carcinoma, nasal polypi (soft, which by irritation or rough unsurgical handling have assumed a somwhat fibrous consistency), adeno-fibroma, osteo-fibroma, chondro-fibroma, and, possibly, gumma.

The prognosis in these cases depends, of course, to a certain extent at least, on the size of the tumor with which we have to deal. If left uninterfered with death would eventually result, the tumor extending and destroying surrounding vital parts by pressure. The growth of the tumor is, as is the case, I believe, in fibroids *generally*, slow. The earlier the operation the more satisfactory the prognosis. If the removal be accomplished before the growth makes it necessary to resort to one of the more heroic measures (removal through the palate or resection of the superior maxilla), I consider the prognosis would be good. The main and only danger is the profuse and sometimes uncontrollable hemorrhage.

Chemical caustics, evulsion or avulsion, electrolysis, galvano-cautery, splitting the tumor with the galvano-cautery knife and snaring each half separately, have been tried with varying results. All things considered, I prefer the cold or hot wire snare when the growth is not too large. When the tumor *is* too large for intra-nasal operation, then we would be forced to resort to one of the more heroic measures, as Rouge's, Cassaignac's, Ollier's, Langenbeck's, the case being referred to a general surgeon.

Case I. Referred by Dr. K. C. Divine. C. E. M., male, æt. eighteen years, dry goods clerk. Consulted me in June, 1894. Family history excellent. Father and mother both living and in good health. Never heard either complain of any nasal trouble, more than ordinary colds; no record of any tumors occurring in his family. Consulted me on account of one side of the nose being completely blocked up; also complained of chronic, and at times profuse, nose-bleeding; gave history of intense occipital and frontal headaches. About ten or twelve months before consultation first noticed slight blocking of left side of nose; the obstruction continued to increase and a discharge began; his description of the discharge was unusually accurate for a layman. Nose-bleeding did not begin for several months after noticing the first obstruction; these hemorrhages increased in severity until some ten days before consulting me; he bled sufficiently to cause fainting. The bleeding was sometimes through the ant. nares, sometimes the posterior. Headaches had been

present about two months. Examination anteriorly showed the left nasal chamber open as far back as the junction of the middle and post. third; at this point I found obstruction. Throwing in a ten per cent solution of cocaine, and waiting ten minutes, I examined again. I could now see distinctly blocking the chamber a tumor of reddish-pink color, somewhat irregularly rounded, several blood vessels showing on its surface. The tumor was dense, resisting and slightly movable; manipulation caused some bleeding. Post. examination showed growth about three-quarters of an inch from post. border of vomer, filling the nasal chamber completely. I diagnosed the tumor nasal fibroma and advised removal.

I selected the galvano-cautery snare, thinking it safer than the cold wire, although more difficult to manipulate. I did the removal slowly, drawing the wire tight and making the connection about every five minutes. After half an hour I could feel by the snare handle that the tumor was almost severed from its attachment, and was congratulating myself on a bloodless operation, when, at the next turn of the thumb-screw, hemorrhage began; it being impossible to remove the snare, only one course was open to me—to complete the section as rapidly as possible; this I did. By the time the section was finished the hemorrhage was startling, both nostrils pouring forth almost a continuous, solid stream, the patient gulping blood from the mouth as fast as he could spit. Only one measure I felt sure would arrest the harm, so I plugged the post. nares with iron cotton, forcing the plug in as tightly as I could draw it, then packed the ant. nares from the location of the tumor out; then hemorrhage stopped. Roughly estimated, the patient lost something more than a quart of blood. The tumor was about the size and shape of a pigeon egg, the pedicle being between one-third and one-half the size of the tumor, constituting almost a sessile growth.

Dr. J. A. Childs, at that time demonstrator of pathology in the Southern Medical College, kindly made a microscopical examination of the tumor and pronounced it a pure fibroma.

Case II. J. G. S., male, æt. nineteen years, young illiterate German. Consulted me in 1896 for "guitar in the head." Family history excellent. Patient seemed vigorous and healthy. First noticed slight obstruction in left nostril about one year before consulting me; this increased until the nostril was entirely blocked. He gave a history of intense supra and infra-orbital neuralgias; these had become more frequent, as well as more severe, for several months before consultation. Examination showed a large, oblong tumor, extending from about three-quarters of an inch

to an inch of the ant. nares backward to about the same distance of the post. nares, filling the nostril entirely; the growth was distinctly lobulated, of a dead white color; a tracery of blood vessels appeared on its surface; surrounding it was the peculiar whitish, opaque, glistening and markedly granular discharge which I have already spoken of.

Examination with the probe showed the tumor to be dense, resisting and only slightly movable; tumor did not bleed on manipulation, and the patient gave no history of epistaxis.

As well as I could judge the pedicle was about one-third as wide as the length of the tumor, springing, apparently, from the ethmoid. I removed two sections of the growth with the cold wire snare and submitted them to Dr. Leroy Harris, at that time professor of chemistry in the Southern Medical College, now pathologist at Jefferson, for microscopic examination. He pronounced the tumor a true fibroma. My diagnosis was made in accordance with this report. The patient refused operation.

I examined case No. 1 eighteen months after the operation and found no indications of a return of the growth; the patient was in perfect health; reported that the nose did not give him the slightest trouble.

BIBLIOGRAPHY.

1. Senn on Tumors.
2. Burnett.—Throat and Nose.
3. Bosworth.—Diseases Nose and Throat; edition of 1890 and 1896.
4. Sajous.—Nose and Throat.
5. Lennox Brown.—Throat and Nose.
6. Ashhurst.—Encyclopædia of Surgery. Vol. V.
7. Sajous.—Annual of the Universal Medical Sciences, 1896.
8. Bishop.—Diseases of the Nose, Throat and Ear.

A DISCOVERY IN THE PHYSIOLOGY OF THE EAR.*

BY W. F. COLE, M.D., WACO, TEXAS.

No organ in the body has remained enveloped in so much mystery as the ear. The labyrinth was well named by the ancients on account of its mysterious form, second only to the eye in importance, among the senses; it yet remains far less known in anatomy, physiology and pathology. The literature devoted to this subject has been great, and it has attracted some of the most profound scientists of the world. Yet, as stated, there yet remains much that is obscure. He who would understand the ear must be a scientist as well as a physician. Much of the cumbrous literature of the ear is thoroughly unscientific, being merely a mass of speculations and theories. For an epitome of all that is known of the ear we might limit ourselves to the works of Helmholtz on acoustics, and Politzer on anatomy, pathology and treatment. Others have distinguished themselves in certain lines, but these between them practically cover the whole knowledge of the subject to date.

In January, 1897, a young lady, a student at Baylor University, was brought to me by her father and Dr. O. I. Halbert to consult me about her ears, both of which had been discharging since childhood. There was tenderness over both mastoids, and the young lady at times suffered greatly with headache and vertigo. There were no remnants either of drums or ossicles in either ear. The hearing in the left ear was about $^{1}/_{10}$, in the right about $^{6}/_{10}$.

I advised operations upon both mastoids, but nothing was done until the following April, when I received a message to come to Temple, which was thirty miles distant, prepared to operate, as she was suffering greatly. I found her suffering with severe pains in the head, and with considerable fever and mental disturbance.

I did the usual mastoid operation, assisted by Drs. Rogers and Barton. The patient remained in the care of Dr. Barton for some six weeks or two months, when she returned to Waco to attend a summer normal school, and incidentally to resume treatment under my care, as the right ear continued to discharge, the left having healed without further suppuration. I reopened the mastoid wound, securing drainage through the ear, and the discharge ceased from the ear in a short time and the wound healed; but, strange to say, when the

*Read at the meeting of the Southern Section, American Laryngological, Rhinological and Otological Society, Atlanta, Ga., March 28, 1898.

discharge ceased, the hearing almost entirely disappeared, so that she was forced to give up her studies because she could not hear. I applied artificial drums, but none gave relief except a cylinder of paper, which improved the hearing so much that she was encouraged to resume her studies. I continued to irrigate the ear occasionally, and she remarked upon these occasions that her hearing was good while the water remained in the deeper parts of the ear. This has probably been noticed by most aurists, and the accepted theory is that the water acts as a conductor in lieu of the bones, and I supposed that the pus had acted, perhaps, in the same way, and thus I accounted for the loss of hearing when the suppuration ceased.

On one occasion she remarked that the hearing departed with the gurgle of water. Now, the gurgle of water was evidently due to its escape from the attic and antrum cavities. It struck me that, perhaps, the improved hearing was due to the closing of those cavities. I placed some moist cotton into the anterior tympanic and attic space, and found that this acted precisely as the water and pus had done, even improving the hearing so that it was better than she had ever known.

I now decided that neither the cotton nor the water acted as a conductor of sound, but that they cut off the large attic and antrum space from the tympanum, preventing the dispersion of the sound-waves, or condensing them, as it were, upon the walls of the tympanum, or upon the fenestræ. Now, in the normal ear, the ossicles with their attached membranes, muscles and ligaments practically separate the antrum and tympanic spaces so that when the outer drum and the ossicles are destroyed the intensity of the sound-waves is lost by dispersion. I found, on irrigating, that in such ears the fenestrum ovalis, so far as I could detect, took no part in the conduction of sound to the inner ear. I found that it made no difference whether I covered the fenestrum ovalis with the cotton or not, so long as the attic and antrum spaces were cut off. I found that when I covered the fenestrum ovalis the hearing was improved, because it is impossible to cover the ovalis without to some extent cutting off more or less the spaces named. I found that when I applied cotton over the posterior part of the tympanum, covering thereby the fenestrum rotunda, the hearing was greatly impaired, thereby indicating that in such ears at least sound reaches the inner ear, not through the fenestrum ovalis, but through the rotunda. I found, by experiments, that the greater the concentration upon the rotunda, the better the hearing. I have obtained the best results when I could reach the rotunda with a thin rubber tube. Such is attainable only in ears

where the margo tympani is removed posteriorly, otherwise the remains of the drum prevents the proper insertion of the tube. I have four patients who are now wearing such tubes, with most gratifying results. In all, to date, I have examined fourteen patients, and in all my theories of the conduction of sound have been verified. In some the application of the tubes was impractical, because of remains of drum; in others the improvement was slight, because of the hypertrophied condition of the membrana tympani secondaria or the drum of the fenestrum rotunda. Politzer has noted that in many cases improvement in hearing was obtained by means of such tubes when other means had failed, and I am surprised that so scientific an observer as he did not see the reason for these results, but he is an illustration of the difficulty with which we free ourselves from accepted theories. He, with all others of the present time, believe that nearly all sound passes through the fenestrum ovalis. He modified Toynbee's artificial drum by attaching the stapes of a dead body, by means of a thread, to the disc in such a way that the foot plate of the stapes should rest in the niche of the fenestrum ovalis, but he evidently did not regard this ingenious device as a success.

I will state here that in my opinion the invention of the so-called artificial membrana tympani has been the greatest misfortune that could have befallen the science of otology. It has been a stumbling block to every otologist for the past fifty years. It was just fifty years ago, in 1848, that a New York merchant went to see Yearsley, in London, and showed him how he improved his hearing by means of a paper cylinder. Yearsley verified this case in others, and wrote a book on the subject, which was the beginning of the innumerable inventions of artificial membrana tympani which have followed since that time. In the case of the tubes which I use, I find that it requires judgment in shaping them to fit each case. As a rule, the tube is from a half to three-fourths of an inch in length. The inner end is cut square off and a notch made in one side of the cut end. Care is required to see that the outer end is in line with the axis of the meatus. The tube is inserted carefully with the notch posteriorly. The notch is intended to allow the sound-wave to pass directly to the fenestrum rotunda, because in some cases I have found that the fenestrum is so near to the posterior wall of the tympanum that if the notch is not made the wall of the tube will cover the fenestrum.

The discussion thus far has been preliminary to the promulgation of what I regard as my discovery in the physiology of the ear, viz.: that sound passes, not through the fenestrum ovalis, but through the

fenestrum rotunda. I cannot better explain the accepted theory of conduction of sound than to quote Roosa.

He says: "The vibrations of the atmosphere are conveyed through the ossiculi and fenestrum ovalis to the perilymph of the labyrinth. They pass as waves over the vestibule, semi-circular canals and other parts of the labyrinth, and are there transmitted to the scala vestibuli of the cochlea, and, passing down the scala tympani, end in an impulse against the fenestrum rotunda."

The most wonderful roundabout way for a sound-wave to travel.

Most elaborate experiments have been made to show how sound is transferred from the vibrating membrana tympani through the ossicles and thence to the inner ear, but I think most persons will agree with me, on investigation, that such a thing is not very scientific. The limits of this paper preclude much argument, that the auricle gathers like a funnel the sound-waves, enabling also to note direction. The sound-waves, gathered and focused, as it were, strike upon the membrana tympani, which vibrates, not as a whole, but in segments which happen to be in accord with the pitch of the sound-waves. The vibrations of the drum-segment are transferred, not to the ossicles, but to the air in the tympanum, the vibrations of which, in turn, strike upon the membrana tympani secondaria or membrane of the fenestrum rotunda, which is situated in the posterior part of the tympanum, hidden away behind the promontory and at the base of the cochlea, or that part of it known as the scala tympani. The vibrations are transferred directly to the fluids of the cochlea and the nerve filaments in the organ of Corti. There is as much difference in the two routes as there would be in going from New York to San Francisco by rail or going around Cape Horn. The sound-waves pass through the air of the tympanum in the same way that sound passes through a speaking-tube. Sound is transferred almost indefinitely through closed tubes, because it is not lost by dispersion.

There are several points of analogy between the laws of light and of sound. Sound is refracted; it is reflected. Two of the best examples of reflection that I know are found in Statuary Hall, in Washington, and in the great Tabernacle at Salt Lake City. The laws of dispersion are the same in sound and light, decreasing inversely as the square of the distance. Sound is transmitted easily from a vibrating solid to the air, but scarcely at all from the air to a solid unless the fundamental tone of the solid is the same in pitch as that of the vibrating air. Thus, if two tuning-forks of the same pitch are brought near each other, one vibrating, the other will be set vibrating through the vibrations of the air. Every solid has its own time

of vibrating or pitch, known as its fundamental tone. A vibrating solid may transfer its vibrations to another solid having a different fundamental pitch, but at the expense of a considerable force from the first solid. Thus, the pitch of a tuning-fork and a piece of board have quite different fundamental tones, but if the vibrating tuning-fork be placed upon the board then the board will vibrate in the pitch of the fork, but the vibrations will be forced vibrations at the expense of the vibrant fork, whose vibrations will cease all the sooner by reason of the loss of force. I am only enumerating these well-known laws for the sake of argument, which I will now present.

The accepted theory is that sound-waves strike upon the drum, setting it into forced vibrations. The vibrations of the drum in turn are transmitted as forced vibrations to the ossicles and throughout the labyrinth. Each bone, doubtless, has its own fundamental vibration. I doubt if the drum does have a fundamental tone, but most authors assume that it does.

We see from this what resistance a sound-wave would meet with in passing to the auditory nerve, according to the accepted theory. The chirp of a cricket is heard, perhaps, a hundred feet, though the sound is made by the drumming upon a little membrane on the side of his thorax. Knowing the law of the dispersion of sound, is it conceivable that such vibrations could be heard at a hundred feet if they must force the vibrations of the conducting apparatus, as taught at present?

Such a proposition is not rational to me.

Scientifically, we can scarcely conceive of a poorer sounding-post than the chain of ossicles, with their attached muscles, ligaments, membranes, etc.

In my opinion, the functions of the ossicles are to regulate the tension of the drum, and perhaps that of the labyrinthine fluid, and indirectly that of the membrane of the rotundum.

The ossicles constitute a system of levers which are acted upon by the tensor tympani muscle.

The misconception as to the physiology of the ear is responsible for our poor results in understanding the pathology and treatment.

The late Samuel Sexton told me on one occasion that he was led to do what was known as his operation by reason of the utter hopelessness of giving any relief by the known methods of treatment. His idea was that by removing the drum and malleus and incus the sound-wave would strike upon the bony foot-plate of the stapes and be thence transmitted through the ovalis, etc.

To me this is most irrational, though I have done the operation

several times, and attained good results in two cases; but these results were due not to the removal of the ossicles but to the removal of a thickened or hypertrophied drum, so that the sound-waves struck directly upon the inner drum of the rotundum. If I am correct, we may expect more rational treatment of the ear. We will never remove the ossicles, but will often remove sections of the drum to apply medication direct to the tympanum.

A case of mine will illustrate this point. Some three years ago a young lady was brought to me suffering with otitis media in both ears. There was mastoid disease in the left, though it was the main reliance in hearing and had not been affected so long as the right. The hearing in the right ear was almost nil. There was no drum in the right except the margo tympani and a slight margin about the handle of the malleus, which was badly diseased so that the first time I irrigated this ear part of the handle broke off with the dessicated drum and came away. Under the treatment the right ear became healthy, the drum was reproduced, and to-day her hearing in this ear is apparently normal. The attachment of the tensor tympani was evidently not affected; the inner drum was evidently restored to a healthy condition with the reproduction of the outer drum.

The history of the other, and apparently the better ear, is another story. The young lady was rather delicate, and the family physician advised against the use of an anæsthetic. An operative treatment was imperative. I removed the stapes and incus under cocaine, in order to reach the seat of suppuration through the attic and antrum. The treatment was not a success, and while I was on a visit to New York the conditions became so alarming that the family consented to a mastoid operation under chloroform. I resumed treatment of the case on my return, and complete recovery occurred, but with almost complete loss of hearing, because there was nothing to regulate the tension of the drum which grew back.

There are cases where the ossicles are destroyed but where the drum shows a tendency to reproduce. In such cases I would destroy the margo tympani, which would prevent reproduction. I will illustrate this point with the history of a case.

A German girl, aged about twenty years, was brought to me suffering with mastoid disease and discharge from both ears. The young woman had been in this country about four years, working as a servant, but much of the time she had been unable to work because of severe headaches, and lately she had been unable to secure situations because it was said that she acted queerly during these attacks, due, perhaps, to septic infection from the diseased mastoids. I

should state that she gave a history of otorrhœa from childhood, and had been treated in both Berlin and Breslau before coming to America. I opened both mastoids with a dental engine and drill, with cocaine as an anæsthetic. I am not aware that such an operation has been done before with cocaine as an anæsthetic—that is, where the bone is removed. I had done this operation previously in a case of weak heart. I injected cocaine under the skin over the mastoid. I used a trephine made for me by Dr. Dupree, a dentist. The trephine had a cutting instead of a saw edge. The cylinder was attached to an old engine drill, so as to be operated by the engine. With this trephine I could cut the skin and soft tissues down to the bone almost instantly. I used chromic acid to stop hemorrhage. The acid acts as an instantaneous hæmostatic, and it serves a useful purpose afterward by preventing a too rapid filling in of the wound with granulating tissue. The drilling of the bone itself is almost painless, and for this purpose I use an ordinary dental bone-drill. I secured drainage through both ears with rapid and complete recovery, and the scars in this case would never be noticed. The point that I would make in this case is in reference to the drums, which showed a tendency to reproduce, and they also prevented the use of the tubes. I destroyed the margo tympani in both ears, after which I was enabled to use the tubes with perfect success.

In conclusion, I will recapitulate a few points which have been overlooked. One thing is this, that largely by means of the cases referred to I have been enabled to satisfy myself as to my theories, yet I find that almost every phenomenon observed by me has been also observed by others. The fact is that it is impossible for anyone to be strictly original in a profession so old as that of medicine. Pascal, and at a more recent date Sapolini and Pecchi, advocated some of the theories that I do in regard to the transmission of sound to the inner ear. My experiments have not been so elaborate as those of Politzer, Helmholtz and others. The fact is that they went deliberately to prove that sound-waves reach the ear through the ossicles, while I, not finding the drum and ossicles absolutely necessary to hearing, have only attempted to account for a different method of transmission.

The drum in a normal ear is in a perfect state of equilibrium; a closing of the Eustachian tube, or a thickening, or the attachment of a little mucus, will impair the hearing. The fibers of the drum radiate from the attachment of the malleus to the periphery so that they are as varied as the strings of a harp. No animal membrane can be made to imitate the natural drum. I have used bladders and

other animal membranes, but without success, as imitations. The best imitation that I have found is silk, which I stretched over a wooden butter-mold like a drumhead. I made the concave tension by means of a string attached to a small piece of wood on the outside of the silk head, the string passing through the mold and fastened to give the proper tension. I made the convex tension to imitate the short process by a wooden post passing through the mold. Drumming upon this silk drumhead with a small rod gave different notes, according to whatever segment was struck, according to the length of the tense cloth producing the chords.

I cannot conceive it possible that every gentle tone that reaches the brain must necessarily set in vibration the whole drum membrane and the ossicles with all their muscles and attachments; such would require great force. A sound-wave, as a result of energy or as a transferred force, could never equal or exceed its source, without ever considering the well-known law of dispersion. The ossicles and drum are very small in themselves, yet it requires considerable force to vibrate them as a whole—far more force, indeed, than would be possible by nearly all the sounds which reach the ear. The ease with which solids are thrown into vibrations by waves that are in the same pitch has been noted, and also the greater difficulty of forcing them to vibrate in other than fundamental pitch. I am only surprised that others have not noted this discrepancy in the old theories.

The human ear has to a great extent the capacity to isolate the music of any instrument in the orchestra or any voice in the chorus, depending merely upon a selection by the mind, though conductors attain by training a wonderful capacity for following the tones of many instruments at the same time. I am of opinion that neither the ossicles nor the drum as a whole could vibrate to so great a multiplicity of sound-waves at the same time, but a membrane such as the drum, vibrating in segments, and the air of the tympanum and the fluids of the labyrinth could so vibrate, and the inner drum being in direct contact with the fluids, and so very flexible, would be sensitive to every impulse.

REPORT OF A CASE OF SEVERE HEMORRHAGE FOLLOWING PARACENTESIS OF THE DRUM MEMBRANE.

BY JAMES F. M'KERNON, M.D., NEW YORK.

Aural Surgeon to the New York Eye and Ear Infirmary.

As it is so unusual for anything like an active or severe hemorrhage following an opening of the tympanic membrane by the surgeon, I deem it of sufficient importance to report this case.

M. T., a girl aged thirteen years, native of the United States, came to my clinic at the Infirmary, June 7, 1897, complaining of pain in the right ear and giving the following history:

She had always been well, as far as she knew, until 3 o'clock the afternoon before, when she suddenly became conscious of a severe pain in the right ear, after jumping the rope with other children continuously for about half an hour.

This pain continued during the night, preventing her from sleeping, and the usual domestic remedies were used by her aunt to stop the pain, namely: sweet oil and laudanum, glycerine, spirits of camphor, oil of cloves, and, finally, camomile tea, which, she said, was the only thing that gave her any relief.

On inspection, she seemed to be a robust, well developed girl for her age. Her temperature was 99°F. and pulse 88. On aural inspection, a small amount of hardened cerumen was seen lying within the meatus. Beyond this could be discerned the drum membrane, presenting a bulging appearance over its anterior superior and anterior inferior quadrants. Also a lesser bulging was noticeable at the posterior inferior quadrant. The color of this bulging portion of the drum was blue and purple-looking. Shrapnell's membrane and the remainder of the tympanic membrane were deeply injected. The ossicles could not be seen. There was no change in color of the canal walls from that of normal.

Thinking I had to deal with a simple case of acute otitis media, the cerumen was gently syringed away with a bichloride solution of $^1/_{3000}$. The canal was then sterilized by mopping it with a solution of alcohol, two parts, and bichloride $^1/_{1000}$, one part, and an incision made in the most prominent part of the bulging drum, namely, the anterior inferior and the lower half of the anterior superior quadrant. Before the knife could be withdrawn from the speculum there was a gush of bright-colored, arterial-looking blood. The knife and specu-

lum were withdrawn and the blood spurted from the external auditory meatus, covering the child's clothing on that side of the body. It not only ran out of the canal, but spurted directly outward for nearly two feet, saturating both the patient and operator. A pledget of cotton was placed in the canal and carried down to the drum membrane, but the hemorrhage was so active that this was useless as a controlling agent.

By this time the patient was thoroughly frightened and had to be held in the chair. The cotton was removed from the canal and the canal again packed, this time with iodoform gauze, pressed firmly against the drum. This did not seem to have any particular value in stopping the hemorrhage, as it bled profusely through the gauze and through several compresses external to the gauze over the meatus. Seeing that the flow of blood was synchronous with the radial pulse, pressure was made over the common carotid artery of this side and the flow at once began to diminish and stopped altogether in two or three minutes.

Pressure was still kept up, the compresses and gauze removed, and the canal wiped with cotton so as to obtain a view of the drum membrane. This was seen, and at the opening made by the knife, which was about one-third of the distance between the anterior tympanic ring and the tip of the malleus, a small amount of bright blood was seen coming through the opening.

A small strip of iodoform gauze was carried through this opening into the tympanum and packed firmly, pressure being made from above and externally. The canal was also packed with gauze and the pressure gradually removed from the carotid. After a few minutes a slight oozing was perceptible, when pressure was again applied over the carotid, this time for nearly half an hour. At the end of this period pressure was removed and no oozing took place.

She was taken to the ward and placed in bed and a sedative given. She rested but little during the night, complaining of throbbing in the ear, and headache. Slight oozing during the night.

At four o'clock next day the packing from the canal and tympanum was removed, and this was followed by only a slight hemorrhage of bright-colored blood, easily controlled by packing as before.

Temperature normal; slight pain; rested well.

At three o'clock next day, the packing was again removed and there was no hemorrhage whatever. The following day she was discharged from the ward service and came back to the clinic every other day for a week, and later, every fourth day, until the healing in the membrane had taken place. She complained of no pain and the only unpleasant sensation she spoke of was a feeling of fullness

in the ear, and a throbbing at times, particularly upon lying down.

At the time of her discharge, her hearing with the acumeter on the unaffected side was twenty-eight feet; on the affected side, where the hemorrhage took place, she heard at sixteen feet.

The features of special interest here seem to be:

First—The origin of the blood, was it arterial or venous?

Second—Had rupture of any of the intra-tympanic vessels taken place, the result of her too violent exercise in jumping the rope? Or, in performing paracentesis, did the knife pass through and puncture one of the vessels supplying the tympanum?

It would seem that the blood was arterial and not venous, on account of its color, which was bright red, and the fact that it did not come from the canal in a continuous flow, but with a distinct jet or spurt; also this jet from the canal was synchronous with the radial pulse. Again, pressure on the trunk of the common carotid on the affected side stopped the flow of blood almost immediately.

These points taken into consideration would tend to show, I believe, that the hemorrhage was arterial.

Secondly, from the fact that the patient had been free from any aural trouble previously, and that it had developed so suddenly after her very violent exercise, would certainly lead one to suspect that a rupture of one of the vessels supplying the tympanic cavity had taken place, and this seems to me to explain its origin.

The direct source of the blood could not, of course, be ascertained, but it might have taken place from the tympanic branch of the internal maxillary, or the anastomosis, between this and the stylo-mastoid and superficial petrosal from the middle meningeal, or the tympanic branch of the internal carotid.

It does not seem possible that the opening of the drum with the paracentesis knife could have injured any vessel or vessels within, for it was not carried into the tympanum far enough to do harm, unless there was an abnormality present, as the blood started to flow profusely the instant the membrane was punctured.

Dench‡ reports a case of hemorrhage from the bulb, which took place during the removal of the ossicles, where there was a dehiscence of the bone over the bulb and a curette opened into it. He controlled the hemorrhage by packing with gauze, but four days later thrombosis of the jugular took place, necessitating ligation and resection of the vein. The case made a good recovery. Ludwig*, Hildebrandt†, *et. al.*, also report cases of hemorrhage in this region from the the bulb.

116 West Forty-eighth Street.

‡Trans. New York Otological Society, 1898.

*Archiv f. Ohrenheilk, Vol. XXIX, p. 234. †Archiv f. Ohrenheilk, Vol. XXX, p. 183.

REPORT OF A CASE OF CHOLESTEATOMA OF THE MASTOID ANTRUM.*

BY DR. S. L. LEDBETTER, BIRMINGHAM, ALA.

On the 15th of April, 1897, a young German applied to me for treatment. He was strong and hardy, but somewhat worn from recent suffering. He had a chronic suppurative otitis media in the left ear, and for a month or two the suffering had been intense, requiring frequent administrations of morphia to relieve the pain. There had also been some dizziness. On examination I found a copious and offensive discharge, some granulation tissue and exfoliated skin, which I cleared away. This afforded considerable relief to the patient. There was an opening in the upper part of the drum membrane, through which a free flow of pus was maintained. The opening was about one-eighth of an inch in diameter, and, apparently, afforded sufficient drainage. The ear was dressed daily for a couple of weeks. The pain disappeared almost entirely, and the discharge was diminished. Some granulation tissue sprang up in the fenestrum. This was removed with a curette and treated with styptics. The patient went home at the end of two weeks, not well, but practically free from pain, and the condition of the ear apparently much improved. Two weeks later he returned, looking like a ghost of himself, thin, haggard and staggering, so that he had to be supported.

The external auditory canal was filled with what appeared to be a fleshy growth. It was removed with the snare, and proved to be a portion of the skin and periosteal covering of the external auditory canal, pushed forward by granulation tissue. The pain and dizziness were but slightly relieved by the operation, and the discharge was undiminished. I advised the opening of the mastoid, to which the patient readily consented. The operation was done the following day, and a large quantity of dead skin and granulation tissue were removed from the middle ear. A solid mass of exfoliated skin was removed from the antrum. The entrance to the antrum was through a dense, healthy-looking bone, and the mastoid cells did not appear to be involved in the trouble. The patient was practically free from pain after the second day, and when I left the city, two weeks after the operation, he was able to go about the house quite comfortably,

*Read at the meeting of the Southern Section, American Laryngological, Rhinological and Otological Society, Atlanta, Ga., March 28, 1898.

though the discharge still kept up, and there was still some slight dizziness. I left him in charge of competent surgeons. On my return I found that the physicians, whom I had left in charge, had been dismissed in a week or ten days after my departure.

The patient began suffering again, fell into other hands, was operated on again by a general practitioner and died a few hours after the operation.

I do not know what the conditions were which called for another operation, nor do I know the immediate cause of death. I hardly think it likely that there could have been a reaccumulation of the cholesteatoma in so short a time. More likely the inflammation had extended to the cranial cavity, resulting in a meningitis, or a subdural abscess. It is not at all improbable that pus had found its way into the dura before the first operation, and that I had failed to discover it. While the opening was large and the drainage free, the untoward symptoms were in abeyance; but so soon as the opening began to close up the retained pus began again to cause trouble.

I saw several operations last summer which convinced me that, in many cases, sufficient diligence is not exercised in the tracing up of pus channels, and of the possibility of overlooking pus cavities, even in the most carefully performed operations. I saw Dr. Knapp, of New York, do the third operation on a case, finding additional pus centers each time, although he had explored the dura in the first operation.

I made two mistakes in my case. The first, in not operating on the patient when he first came to see me; the second, in not exploring more carefully for extensions of the trouble when I did operate. For, surely, looking backward at the case now, it seems that there were urgent indications for operative procedure from the first; and, with proper treatment, my patient might have been saved, though it is possible the mass had already absorbed away the bony partition, that the dura had already been exposed to the pus, and that conditions had already developed which would have eventually proved fatal. But I do not feel that I can hold myself blameless when I have failed to give the patient the benefit of all doubt.

This was, to me, a very ordinary case in several respects. I have frequently seen the external auditory canal filled with cholesteatomatous mass, coming away, en masse, a perfect cast of the canal. But this was the first case in which I have found such a condition existing in the mastoid antrum. The rapidity with which the periosteum and skin were forced away from the bony canal of the external ear, and the canal filled with granulation tissue, was to me phenomi-

nal (two weeks), so much so that I had a microscopic examination made of the tissues removed, thinking that there might be some malignancy about it, but found none. The dizziness, nausea and pain of which the patient complained when he came to see me the second time were the most intense I ever witnessed; but there was at no time tenderness or œdema over the mastoid.

ASEPSIS IN OTOLOGY AND LARYNGOLOGY.

BY A. B. MCKEE, M.D., SAN FRANCISCO.

Sometime since I noticed an article in THE LARYNGOSCOPE calling attention to the necessity for the observance of antiseptic precautions in office practice. However, no suggestions were given as to practical methods by which this could be carried out.

The following hints may be found of value:

1. To sterilize cutting instruments, place in 2½ to 5% carbolic solution 15 or 20 minutes, then dip them, for a few seconds, into boiling water. By means of a pocket alcohol stove, there is no difficulty in preparing, in a few moments, all water necessary for sterilization.

2. To sterilize tiles, trays or dishes for instruments, pour over them a few drops of alcohol and ignite it. The asepsis is complete.

3. To sterilize blunt instruments (forceps, tongue spatulæ, etc.), pass them through a spirit lamp, which should be on every instrument table.

4. To sterilize catheters, antrum canulæ, etc., boil them, for a few moments, in a porcelain-lined dish, such as is used for holding soap or nail brushes.

5. To sterilize cotton pledgets for wiping out the ear, dip the cotton wound probe into a saturated alcoholic solution of boric acid, ignite it and allow it to burn a few seconds, extinguishing before the cotton is charred.

6. Needles—preserve in pure lysol.

TWO EAR CASES AND THEIR LESSON.

BY JAMES B. TAYLOR, M.D., BLOOMINGTON, ILL.

Each of the following cases has its special lesson; but they unite to enforce a common, broader lesson, and hence are grouped. That general lesson pertains to the all-importance of details and gradations in medicine. Both this general truth and the specific therapeutic points are kept in mind in this report.

Case I. *Showing the value of energy as compared with easy-going methods in massage of the drum for adhesive cases, and suggesting the ground of frequent failures of massage as applied for this affection.*

This history sharply illustrates what we, as physicians, are too prone to forget. That point is that difference in degree of treatment is often of equal importance with difference in kind. After we have settled the matter of *genus*—of broad class of treatment—there comes a still more exacting selection and adaptation of gradations and of particulars.

It is this wise selectiveness and keen-minded adaptation, when we can attain it, which makes our profession an art. It is this which makes the difference between the routinist and machine man—the dangerous holder of an undiscriminated secret—on the one hand, and the successful practitioner in the sense of accomplishing scientific ends, on the other.

We strike a central truth with important bearings when we say that in its proper pursuit and needs there is no calling or business which is so plastic, so adaptive, as medicine.

Fortunate, concrete illustrations (the subject is worth illustrating) are found in the local use of antipyrine or cocaine as an adjunct to inhalations in obstinate laryngeal coughs, in order to hold the parts until we get the effect of the nebulized treatment, the whole outcome of the handling turning upon this single point; or in the cutting of suitable slots in the delivery tube for formaldehyde gas in using the same, fresh generated, for the cure of a long-standing ear suppuration which has resisted ordinary methods, the slots admitting the requisite amount of fresh air to dilute the gas and bring down the temperature to usable state; or, lastly, in making the use of resorcine sweeping and heroic against fermentation in digestive tract, if ordinary and standard use of it has not attained our ends. The alert, adaptive general practitioner—the man who uses his agents as a fencer uses his

sword—would that his number were greater!—of course, illustrates our point in a multitude of ways.

Miss R. came for treatment July, 1896, with the following ear record on test: Right ear, watch, no hearing; fork, one inch. Left ear, watch, one inch; fork, two inches. Combined ears, medium conversation, two feet.

The history was one of progressive neglected middle-ear catarrh of dry and adhesive variety and of two years' standing. Patient was put upon routine treatment of resolvent inhalations and moderate inflations; also, counterstimulation behind ear. General health likewise cared for and improved.

This handling resulted in bringing hearing up in about two months to practically double its first record; fork, for left ear, being made four and one-half; watch, two; fork, for right ear, three, but watch still *nil.* For vocal tones, a somewhat greater gain.

Here we stuck fast. Persistent attention for months (patient was near office, and case was financially adjusted for a long campaign) gave no further advance, though improvement already gained was held successfully. The whole gamut of ordinary devices (including somewhat active dilatation of Eustachian tubes and average massage) was run with no better results.

At this stage, some eight months from beginning of treatment, decision was reached to give the lady a wide range of liberty in treating herself as regards amount of massage, and to watch the outcome. It is a pity that this decision had not been reached six months sooner. Patient being at this time an adept in use of apparatus for herself, soon ran the number of massage impulses per day up to seventy-five, and sometimes double this number, and then a change came. The repeated ærial hammer-strokes from within outward, from the condensing chamber of a Globe multi-nebulizer, had prompt effect in giving us what moderate, and we may call standard, treatment had not accomplished. In less than two months the record rose to: Right ear, watch, four inches; fork, five inches. Left ear, watch, twenty-six inches; fork, fourteen inches. Combined ears, forced whisper, fifteen feet.

Any symptoms of reaction were watched for, and on the few occasions when tenderness developed, the activity of treatment was lessened for a day or two. Evidently the radical massage had done for the ear just what manipulation does for the stiffened and partly anchylosed elbow joint. The effects in each case are both mechanical and absorptive; and as the procedure is rational for the elbow, it is rational and physiological for the ear. The results were so permanent in our patient's case that she went successfully into a

mercantile clerkship, and sustains herself there after months of trial.

If we survey the otological field, it is beyond question that systematic massage marks the greatest advance in these lines for the past ten years, its best achievements being within the last five years. And certainly restoration of the function of an organ is, *pro tanto*, as compared with any other work we can do for it, the highest and most brilliant result we can achieve. Jankau has reported some striking results. The elaborateness of treatment, number of massage—impulses, recommended by him, corresponds in a broad way with the experience and teaching of our case—and other similar ones not cited. The force of Jankau's apparatus, however, is evident by less than that used and demanded in the case of Miss R. Just here let us say, with reference to the use of considerable force in the ear (for selected cases and after milder methods have been excluded by trial or previous experience), that the consensus of opinion and up-to-day practice is toward greater boldness in this direction. This is in entire keeping with the nature of the onward movement of general surgery. A summary of the history in both the general and the special fields is greater freedom with more careful methods. Overthrow of the idols of fear in many directions, coupled with greater confidence in natural methods in yet other quarters, is the characteristic of the time. Both positive truths are growing upon us.

As to methods of procedure for such cases as that of Miss R. here cited, experience has emphasized the following points for the writer:

First—Propulsion massage—massage from within—is much preferable to external or suction massage, because (a) it avoids soreness and the frequent furuncles of external canal caused by pressure of suction apparatus tightly adjusted; (b) it opens the Eustachian tubes much better than the rarefaction of so small an amount of air as found in the tympanic cavity; (c) the impulses from, for example, a Globe nebulizer, furnished with its stop-valve, and giving rapid, shot-like discharges, are much more efficient than the pulls produced by a suction apparatus; also more effective than the impulses from any hand-bag apparatus for internal massage; and (d) with such apparatus for internal massage as that placed in hands of Miss R., whether Eustachian catheter be called for or not, majority of intelligent patients may be taught to administer their own treatments under the physician's supervision. This is a very practical point for the saving of time when seventy-five to one hundred and fifty applications are made per day, rendering possible for a busy practitioner what could not otherwise well be reached.

Second—Comparing the use of active (it may be forcible) internal massage with the process of incision of drum-head and employ-

ment of hook for loosening adhesions, massage is in the rule decidedly to be preferred, since it looks to progressive tissue metamorphosis along with mechanical alteration, while the use of the hook, limited usually to a single application, brings results which are almost exclusively mechanical. In extreme cases a combination of the processes may be called for, and has been found useful by the writer.

The second case, possessing, as we think, some intrinsic interest for itself and contributing to enforce the great importance of details —how that small things are often the turning point—is as follows:

Case II. *Showing the serious effects of a very small patch of mould in the tympanum, and relief following its detection, identification by microscope, and easy extermination when its character was determined.*

Mrs. H., living in another State, had for years been troubled with deafening *tinnitus* of left ear. Was attacked from time to time with serious dizziness. Felt deplorably nervous. Life had become a burden. Various washes had been tried without success. Consultations in which the unusual and minute cause had not been detected, had been fruitlessly held, until the party had wholly lost her courage and hope. Inspection showed as follows: External canal normal, its epithelial cells being quite intact; anterior lower third of drum-head gone, from some early suppuration, now forgotten by patient; drum-cavity dry; on its inner wall, partly covered by remaining part of membrane, a small, white, velvet-like area, suggestive of the vegetable mold *aspergillus glancus*. A small bit having been removed, the microscope confirmed the diagnosis; and a lotion of hyposulphite of soda, followed by a germicidal powder, relieved the case permanently in a few days.

Here was a small grain-field, as it were, of this vegetable parasite hidden away in the drum-cavity, the tiny plant lifting its stalks and showering down its spores from their heads, the processes of growth and reproduction in the mucous membrane giving the series of distressing experiences from which the patient suffered.

Can there be a better illustration of the minute things which are constantly facing the medical practitioner with very serious and often crucial importance attached to them? It is not too much to say that for scientific success (we are not speaking of commercial success or of gulling the people) no other profession calls for such incessant vigilance and such painstaking, delicate, carefully made discriminations.

This is the demand which is made upon us, and before which all of us fall down too often.

NEW INSTRUMENTS.

NEW CURETTES AND AN INSTRUMENT FOR THE REDUCTION OF HYPERTROPHY OF THE POSTERIOR END OF THE INFERIOR TURBINATED.

BY LEWIS A. COFFIN, M.D.

Assistant Surgeon, Throat Department, Manhattan Eye and Ear Hospital, New York.

Fig. 1 represents an instrument for curetting the naso-pharynx. This instrument will do all the work in the vault of the pharynx that can be accomplished with any other curette and has these advantages:

FIG. 1.

First—It is a light, well-balanced and sightly instrument.

Second—It can be used with aid of mirror; or,

Third—Can be used under end of index finger acting as guide.

Fourth—It can be used to curette the various fossæ of the naso-pharynx; and,

Fifth—It will clear the adenoid tissue from the base of the sphenoid better than any instrument it has been my fortune to use.

FIG. 2.

To remove tissue from the base of sphenoid and well up against septum, a palate retractor should be used, when, with the aid of a mirror or finger, the curette should be placed in front of the growth and pushed directly back toward the posterior wall of pharynx, after which a scraping motion should be used.

In chronic catarrhal naso-pharyngitis, I have gotten most satisfactory results by lightly curetting the membrane previous to using one of Mandell's solutions or some modification of same.

Fig. 2 represents a curette, in every way like that represented by Fig. 1, except in curve of shank. It is designed for use in the oro-pharynx and can be used up or down over a greater surface, I think, than any other instrument. It is especially useful in treatment of chronic follicular pharyngitis.

FIG. 3.

Fig. 3 represents an instrument for the reduction of posterior hypertrophies of the inferior turbinates.

It consists of a curved canula, which can be attached to an ordinary hypodermic syringe, and to which needles of various lengths and curves can be attached.

In the cut it is shown attached to a syringe, having finger rings on needle end of syringe for purpose of holding instrument firm and steady.

Loading syringe with monochloracetic acid and adjusting control screw on piston, so that not more than one or two drops can be ejected, the needle should be inserted into the growth, using palate retractor and mirror, and the injection made. This is a safe procedure and one sure to produce desired results.

145 West Twelfth Street.

EDITORIAL DEPARTMENT.

EDITORS AND PROPRIETORS.

FRANK M. RUMBOLD, M. D. M. A. GOLDSTEIN, M. D.

ASSOCIATE EDITORS.

M. D. LEDERMAN, M. D., New York.
S. SCOTT BISHOP, M. D., Chicago.
W. SCHEPPEGRELL, M. D., New Orleans.
F. B. EATON, M. D., San José, Cal.

FOREIGN EDITOR.

DR. ST. CLAIR THOMSON, London, Eng.

FOREIGN COLLABORATORS.

J. DUNDAS GRANT, M.D., London; J. J. KIRK DUNCANSON, M.D., Edinburg; DR. VICTOR URBANTSCHITSCH, Vienna; DR. MARCEL NATIER, France; DR. J. K. KIMURA, Tokio; DR. G. STERLING RYERSON, Toronto; DR. FREDERICK SEMELEDER, Vera Cruz; DR. GOTTLIEB KICER, Copenhagen; J. WATSON WILLIAMS, M.D., Bristol, Eng.

ORIGINAL ARTICLES for publication should be in the Editorial Office on the 5th of the month preceding date of publication.

ILLUSTRATIONS necessary to elucidate the text will be furnished, without expense to authors, when suitable ink drawings or photographs are furnished.

SUBSCRIPTION price, $2.00 per annum in advance. Foreign countries, within the Postal Union, $2.25.

CONTRIBUTORS to THE LARYNGOSCOPE who desire reprints will please communicate with the Shallcross-McCallum Printing Co., 419-421 N. Fourth St., St. Louis, Mo., U. S. A., stating the number they wish, at the same time that they forward their MSS. to the Editors.

COMMUNICATIONS and all drafts and money orders should be addressed to

THE LARYNGOSCOPE,
P. O. Box 787, St. Louis, Mo., U. S. A.

EDITORIAL.

WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION.

The meeting of the Western Ophthalmologic and Oto-Laryngologic Association, held in Chicago, April 7 and 8, was an unqualified success. From the opening address to the time of adjournment the interest of all in attendance was unflagging. The character of the papers presented, and the activity and energy of the discussions contributed much to the scientific success of the meeting.

One of the most practical factors of the organization was the division into two sections, one the ophthalmologic, the other the oto-

laryngologic. This facilitated an excellent distribution of work and papers, and carried out to a practical issue the modern idea of separating ophthalmology from its former associates, otology, rhinology and laryngology.

An audience of over one hundred of the prominent special workers greeted Dr. Herman Knapp, of New York, when he opened the scientific programme by his excellent discourse on "Mastoiditis and a New Radical Operation," given by special invitation.

One of the agreeable features of an organization of this character is the meeting of co-workers in different sections of the country whose acquaintance has been enjoyed by letter and by reputation for years, and with whom personal contact contributes much toward the enjoyment of the meeting.

There seems to be a prevalent idea in the minds of many of our special confreres that activity in special medical societies should be considered as a loss of time and energy to the participants. It requires attendance at but a single meeting of a character of the Chicago conclave to convince our skeptical and somewhat narrow-minded fellows of the fallacy of such conclusions. It was the general sentiment expressed that attendance at this meeting amply repaid every sacrifice of time and energy which the members had made.

It was the consensus of opinion that the Association had demonstrated its right to existence, and that it was the duty of every eligible member of the profession, from the Alleghenies to the Pacific, to lend his personal support and active interest to the Western Ophthalmologic and Oto-Laryngologic Association.

We should also take this occasion to express the thanks and appreciation of the visiting members to their Chicago associates for the royal welcome which was extended, and the uniformly courteous reception which made every moment of our stay a pleasure.

It was decided to hold the next annual meeting in New Orleans, two days prior to the opening of the spring festivities. Dr. Scheppegrell, First Vice-President and Chairman of the Committe of Arrangements, assures the Association that every effort will be made to make the fourth annual meeting a memorable one.

The officers elected are: President, J. Elliott Colburn, Chicago; First Vice-President, W. Scheppegrell, New Orleans; Second Vice-President, Casey A. Wood, Chicago; Third Vice-President, H. Gifford, Omaha; Treasurer, W. L. Dayton, Lincoln, Neb.; Secretary, Frank M. Rumbold St. Louis. Twenty-seven new members were elected.

SOCIETY PROCEEDINGS.

THE NEW YORK ACADEMY OF MEDICINE.

A STATED MEETING OF THE SECTION ON LARYNGOLOGY AND RHINOLOGY,

Held in Hosack Hall, on Thursday evening, March 3, at 8:15 o'clock.

Dr. Jonathan Wright, Chairman;

Dr. Thos. J. Harris, Secretary.

Intubation in Diphtheria.

Dr. William K. Simpson read a paper on this subject. It can be said with truth that the advent of intubation for the relief of diphtheritic croup has undoubtedly marked one of the greatest advances of modern medicine, and, in connection with the present antitoxin treatment, has most materially lessened the mortality and robbed of its horrors one of our most fatal diseases.

Notwithstanding that a certain percentage of cases of tracheotomy under the most favorable conditions recovered, the horrors and difficulties incident to operation in young children, the added surgical wound, with the chances of increased infection, the skilled and laborious attention necessary in the after-treatment, and, above all, the great fatality, caused an abhorrence alike on the part of both parent and physician to the extent that the latter gladly delayed surgical interference as long as possible. The speaker thought that this delay was greatly accountable for the fatality attending its performance, for it was a brave surgeon who would tracheotomize in the earliest stages of laryngeal croup.

The real battle of intubation was waged and its glories won before the days of antitoxin, and had the percentage of recoveries been even less than that furnished by tracheotomy, it must not be forgotten that the simpler nature of intubation permitted its performance in hundreds of instances in which either the parents or physician would have objected to or even refused tracheotomy; thus in intubation was furnished an opportunity of at least attempting to save life, which would have been forever denied through tracheotomy.

The question of when to operate is always of vital importance, and especially so if for any reason antitoxin is not employed. According to the report of the American Pediatric Society, sixty per cent of the cases of laryngeal diphtheria would not require intubation if reliable

antitoxin be used in the early stage of the disease. The croupy symptoms should be carefully watched, remembering that it may take twenty-four hours for a full effect of the antitoxin to be manifested. The initial dose of antitoxin should be a full one, and if, in the interval, while waiting for the antitoxin effect, symptoms of stenosis are progressive, intubation should be immediately performed; *never*, in any instance, is it justifiable to await the approach of the severer symptoms of stenosis.

How long shall the tube remain in the larynx? In pre-antitoxin days the average period was from six to seven days. Under the present mode of combined treatment the time may be somewhat shorter, varying from three to five days. Personally, in private practice, he preferred to leave the tube in the larynx during five full days if there were no indications for removing it, on the general principle of avoiding unnecessary reintroductions.

The principal indications for the removal of the tube previous to its final removal are severe discomfort or pain from pressure, especially if the pain be radiating in character, thus indicating the occurrence of ulceration, and severe attacks of coughing as well as sudden stenosis, due to the lodgement of membrane in the lumen of the tube. This last condition is, perhaps, more likely to arise earlier under the antitoxin treatment on account of the earlier exfoliation of the membrane. Sometimes, under these circumstances, the reintroduction of the tube may not be necessary. In a small percentage of cases intubation, after the original course of the stenosis has ceased to be present, there occurs a more or less permanent stenosis, necessitating almost constant use of the tube for a period of a few days to some months. These cases are classed under the head of "Retained Intubation Tubes." Dr. O'Dwyer, in giving the cause and seat of this permanent stenosis, says: (1) "The cause of persistent stenosis, following intubation in laryngeal diphtheria, can be summed up in a single word—traumatism. Paralysis of the vocal cords may possibly furnish an occasional exception to the rule. (2) The injury to the larynx is done by a tube which does not fit. It may result either from an imperfectly constructed tube, or from a perfect one which is too large for the lumen of the larynx, although suitable to the age of the child, or from a tube that is perfect in fit and make if it is not cleaned at proper intervals. (3) The *seat* of the lesion which keeps up the stenosis is just below the vocal cords in the subglottic division of the larynx, or that portion bounded by the cricoid cartilage. Exceptions to this rule result from injury produced by the head of the tube on either side of the base of the epiglottis just above the ventricular

bands." Dr. O'Dwyer sums up the avoidance of its occurrence and its treatment when present: In a full appreciation of its causes and the skillful use of tubes of a proper size, shape and construction, and the use of the hard rubber tube now in vogue, which can be worn indefinitely without the occurrence of the calcareous granules which appear on the metal tubes, and which may become a focus of ulceration; further, the rubber tubes at their impinging points do not produce the same degree of pressure as the metal tubes.

The speaker then went into the technique of the operation. One of the most important points in the technique of the operation is that twisting of the neck of the patient should be guarded against, and keeping everything in the median line; this cannot be too strongly emphasized, as it especially pertains to the successful introduction of the tube.

Successful introduction of the tube is almost immediately rewarded by relief from the difficult breathing. The means of knowing that the tube is properly introduced into the larynx are, first, the relief in breathing, and, second, the characteristic cough which immediately occurs, and is of a moist metallic character, produced by mucus and air passing through a metallic tube. This cough should always be looked for, and if it is not present should be provoked by giving a teaspoonful of diluted whisky or brandy. Another way of determining whether or not the tube is in the larynx is by passing the left index finger down into the œsophagus and feeling the tube through the anterior wall of the former. After the introduction of the tube, if the breathing is not relieved, or becomes worse, the question of having pushed down with the tube some detached membrane is to be considered. This occurrence is infrequent, because the stenosis is not entirely due to a complete cast of the larynx and trachea through which the tube has to pass, but to lessened lumen of the larynx by infiltration of the submucous tissue.

This accident is more likely to occur in late cases of croup, in which the membrane has begun to exfoliate. If for this or any other reason the breathing is not relieved, the tube should be withdrawn by the string and the child encouraged to cough, after which an attempt at a second introduction should be made. Another accident which may occur is the introduction of the end of the tube into one of the ventricles of the larynx. This is obviated by using the present type of tubes, somewhat bulging on the end, which permits it to override the ventricles, and by keeping in the median line during operation. Introduction of the tube into the œsophagus will sometimes occur. This can be appreciated by failure to relieve the diffi-

cult breathing, and by attempts at swallowing on the part of the patient. If the tube does pass into the œsophagus, it is usually expelled by way of the rectum in the course of two to five days. Never attempt to remove the string without making pressure on the head of the tube, as the string becomes twisted in the mouth and will be caught in the eyelet of the tube and the latter itself withdrawn, unless counter-pressure be made.

The operation for the extraction of the tube is perhaps more difficult than of introduction, as it requires a finer degree of touch in the finger to determine the opening in the tube; this difficulty is increased in proportion to the smallness of the tube. Another way of getting rid of the tube is to slightly invert the patient, and, with mouth open, placing the thumb in the episternal notch and pushing the tube up in the mouth and grasping it with the finger of the other hand or with a pair of ordinary forceps. After removal of the tube the patient should not be left until there is sufficient evidence that the tube will not have to be replaced. A small dose of opium may be given to allay the cough and irritation.

Feeding after intubation is best accomplished by having the child in an inclined position, the head being down. This is commonly called the "Casselberry" method. It is best performed by raising the foot of the bed, removing the pillow, and bringing the child to the edge of the bed on the side, and using, for the purpose of feeding, an ordinary duck-shaped feeding cup. The speaker thought it a good practice to keep the child in the feeding position during the entire period in which the tube remains in the larynx, in order to lessen the chances of secretions passing down the tube and thus causing the possible development of pneumonia. The food should be fluid or semi-solid.

The respirations should be watched during the entire progress of the disease; if they continue about normal, it is indicative of favorable progress; if they show a tendency to increased rapidity, it is indicative of extension of the membrane.

The prognosis of diphtheria under the present combined treatment, he thought, remarkably favorable. The collective investigations of the American Pediatric Society gives a mortality in cases operated upon by intubation, and in which, as well, antitoxin was administered, as 27.24 per cent. This was in strong contrast to the previous mortality which ranged from 69.5 per cent to 75 per cent.

Intubation in Chronic Stenosis.

Dr. D. Bryson Delavan read this paper. He said that Dr. O'Dwyer had not only invented but had perfected his art. The de-

velopments of intubation could best be studied from O'Dwyer's own writings. Notwithstanding the good work of many others, it was true that almost all of the important suggestions connected with it had been forestalled by him. This was particularly true with regard to intubation in chronic laryngeal stenosis. No greater contribution to surgery than the article published by O'Dwyer in 1886 has been given to the profession, which was entitled "Chronic Stenosis of the Larynx, treated by a new method, with Report of Cases." Up to 1896, about 100 cases had been reported. Most of them, in which O'Dwyer's method had been applied to the relief of chronic stenosis of the larynx, had been entirely successful. In a few instances, in which complete success had not been obtained, it was evidently due to failure on the part of the operator to understand the method, or else to a faulty application of the same.

O'Dwyer stated that cases in which intubation was effective were as follows:

1. Cicatricial stenosis due to injuries to the soft parts of the larynx.

2. Narrowing of the space above and below the cords by simple tuberculous or syphilitic inflammation.

3. In cases in which tracheotomy had been performed, and in which the tracheal canula having been worn for a considerable time, the upper part of the trachea had become filled with granulations.

4. In a fair proportion of cases of papilloma of the larynx; here the operation appeared to be less brilliant.

5. Where there was the condition known as "web" of the larynx.

6. In anchylosis of the cricoarytenoid articulations, as in arthritis deformans of the same.

7. In various affections of the nerves of the larynx, as in bilateral paralysis of abduction.

8. In deformities of the larynx from injuries to, or diseases of its cartilaginous framework.

In these cases he found that intubation acted as follows:

1. It relieved the urgent dyspnœa.

2. It promoted absorption by pressure.

3. It stretched contracted tissue and cicatricial bands and adhesions.

4. It caused forced motion of anchylosed articulations.

5. In cases of paralysis it brought about a separation of the vocal bands for a sufficient length of time to overcome the difficulty or admit of its treatment.

In 1892, the speaker said, Dr. O'Dwyer had made the statement

that in chronic cases intubation could be performed with greater ease by the aid of a laryngeal mirror.

The speaker related a case in which urgent dyspnœa had come on during labor in a patient suffering from stenosis of the larynx, due to tuberculous thickening of its interior. The prompt insertion of an O'Dwyer tube saved the patient's life and that of her child.

Intubation for Acute Stenosis.

Dr. Charles H. Knight read this paper. He said that the brilliant results of intubation in diphtheria had almost obscured the usefulness of the procedure in other cases of acute stenosis. Scarification was not always sufficient for the relief of œdema of the glottis. Here intubation seemed to be the ideal operation, but for one thing, *i.e.*, the area of œdema might be so extensive as to overhang and obstruct one or the other orifice of the tube. As is well known, the upper part of the air tract (larynx) was most affected by œdema, and this portion was most accessible to the knife.

One authority has expressed his determination to perform intubation in the future in the following conditions:

1. Spasm of the glottis from any cause.
2. In bad cases of laryngismus in infants.
3. Whenever the presence of a foreign body in the trachea is suspected.

In cases of wounds, injuries or fractures of the larynx, obstruction to breathing might follow in consequence of the formation of a hæmatoma, or of emphysema, or because of the protrusion of a piece of tissue or fragment of cartilage into the upper air tract. Laryngismus stridulus usually yields to general or local medication, so that the question of surgical intervention seldom arose. The number of recorded cases with a fatal termination did not exceed six or eight, but sometimes the distress and urgency were so great as to seem to justify such a simple procedure as intubation. Personally, he had used it in but one case of spasm of the larynx, occurring in a middle-aged lady a few months after the removal of a thyroid tumor. Her attacks of dyspnœa became so frequent and alarming that intubation was performed. It gave relief, but she objected so much to the loss of voice that she insisted upon tracheotomy. This was done and she is still wearing the tracheotomy tube.

DISCUSSION.

Dr. H. W. Berg said that every one who sees a large number of acute cases of laryngeal dyspnœa, particularly those complicating diphtheria, will remember, as the reader of one of the papers re-

marked, that occasionally cases occur in which the tube, after having been in for four, five or six days and then removed, must be reinserted, and this procedure may have to be repeated several times on account of the recurrence of the extreme dyspnœa. The dyspnœa may cover a period of weeks and months, and the speaker had seen a case where more than a year had elapsed and still the patient could not get along without the laryngeal tube.

He said he had seen several of these cases in hospital and one in private practice, and two of them he had had the good fortune of having Dr. O'Dwyer see with him. One of these Dr. O'Dwyer had taken under his special care, and although he had hoped it would be relieved by the methods he adopted in the treatment of the case, still the tube had to be worn for many months. Dr. O'Dwyer, in his paper, which was referred to by one of the speakers, said that the long-continued dyspnœa was chiefly due to cicatricial contraction or to adhesions produced by ulcerations along the lower edge of the tube, about the level of the upper border of the cricoid cartilage. This, undoubtedly, was the true explanation in some instances, because, in some cases, in trying to reinsert the tube, some difficulty was experienced in pushing it home. There were a number of other cases, however, in which the above explanation would not suffice. The speaker had seen cases in which there was no difficulty in reinserting the tube, even after it had been left out for some time. He thought that the dyspnœa, in such cases, was dependent upon the effects of the pressure of the tube against the vocal cords. Dr. O'Dwyer thought that this pressure could not possibly produce paralysis of the vocal cords, and he ascribed it to post-diphtheritic paralysis. This theory was hardly tenable, however, because in those cases we never get sudden dyspnœa due to paralysis of the vocal cords. A local paralysis, limited to the vocal cords, can hardly be ascribed to post-diphtheritic paralysis, although it was a possibility.

The treatment adopted by Dr. O'Dwyer, in one case, was to remove the tube daily and to leave it out as long as he could, and then to replace it with a smaller one, if possible. That treatment did not seem to be effective, and in some instances where a smaller tube was inserted, the patient coughed it up.

The speaker felt that cases of this kind, in spite of the brilliant paper of Dr. O'Dwyer on the subject, were still to be explained. We do not know their pathology or proper treatment, and he thought it would be a great achievement if the Laryngological Section could succeed in clearing up that portion of the subject.

Dr. William K. Simpson closed the discussion by saying that in

explanation of the class of cases mentioned by Dr. Berg, where the tube must be constantly worn for a long time, he thought that Dr. O'Dwyer in his paper states that the stenosis was possibly due to a disappearance of the cricoid cartilage. In one such case that had come under Dr. O'Dwyer's observation, the child finally died and at the autopsy it was found that there was an entire loss of the cricoid cartilage.

The other points brought up by Dr. Berg he thought had been thoroughly discussed by Dr. O'Dwyer, especially the stenosis in the sub-corneal space. He thought, with the others, that the subject was one well worthy of study by all of them.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, held on March 23, 1898.

Dr. Robert C. Myles presented three wet specimens of nasal septa, one demonstrating the Gleason U-operation which had been improperly performed. The other specimen was of a deflection almost entirely confined to the triangular cartilage—the condition in which the Gleason operation was especially appropriate. The third specimen was simply a septum which had rather a small triangular cartilage and a very extensive perpendicular plate of the vomer.

Dr. Thomas J. Harris: I desire to present a case which many of the gentlemen here had an opportunity to see two years ago. The history in brief is as follows: The patient is an Italian, thirty-five or thirty-six years of age, who came into my service at the Post-Graduate Hospital with a history of persistent nose-bleed. Examination revealed a mass of tissue filling up the left nares. This growth was removed by means of the Boeckel operation—the nose being thrown to one side—and proved to be a round-celled sarcoma. The patient made a rapid and favorable recovery and left the hospital in seven or eight days. There was no recurrence of the growth for sixteen months. At the end of sixteen months the growth returned. He was again placed in the hospital and was given a course of Coley's lymph. The former operation was repeated, sawing through the nasal bone, and, without much hemorrhage, took out the growth, which filled the ethmoidal cells. I discovered no disease in the sphenoidal sinus. He then again was given Coley's lymph. One year and a half later the growth again recurred and I found it was necessary to have a more thorough operation performed. He was placed in the hospital and Dr. B. F. Curtis undertook what promised to be a very radical and unencouraging operation. He found, however, the bone itself was affected anteriorly, and by taking

away the diseased nasal bone he was able to get access to the growth. The growth extended into the ethmoidal sinuses and also into the frontal sinuses. Following the operation there was no shock or hemorrhage at all. The patient made as thorough and speedy a recovery as in the first operation. This was done last November. There was no attempt to do a plastic operation. Direct inspection to the sinuses can now be easily obtained and the reappearances of the growth watched, and with a curette can be cut out. The exposure in the region of the superior and middle meatus is the best I have ever seen. One can see the sphenoidal sinus, the inner wall of the orbit, the opening into the frontal sinus, etc. It was doubtful at first whether the eye would be retained, on account of the destruction of the inner wall, but the tissues have re-formed in a most excellent degree.

Dr. Robert C. Myles: Two or three years ago I reported a case similar to this one. I think I showed the case. It was one of sarcoma of the antrum. The patient was a lawyer. Dr. Wyeth made a complete removal of the right superior maxilla. The man now is practicing law and there is no manifestation of recurrence. Dr. Prudden made the microscopical diagnosis; it had all the physical characters of the disease.

The Chairman, Dr. Wright: Sarcoma of the nose and throat is certainly a curious sort of disease. The majority of them, of course, are fatal, but occasionally these cases are, like the one reported by Dr. Bosworth, as existing in the pharynx for many years. The continued removal of the growth from the surface of the posterior pharyngeal wall resulted in ultimate cure. Now, of course, such operations do not cut out all of the growth. Of course, we have not seen the patient before the operation, and Dr. Harris assures us it was all taken out. It seems to me that working through a hole the size of this incision, with every part of the ethmoid cells in sight, the operation should have been a very complete one and yet a certain skepticism may be allowed as to whether all of the morbid growth was removed.

Deviation of the Nasal Septum.

Dr. Robert C. Myles continued the discussion on this paper. (Discussion adjourned from the previous meeting.)

I will say but little concerning the etiology of deviated septa. Delavan, Roe and others have gone rather deeply and extensively into the subject. My observation has furnished me frequently with positive evidence that deviated septa are due to force having been applied to the external nose. I have read and entertained many in-

ductive and seductive arguments sustaining the theory that deviations were caused by the development and formative changes of the bones of the head; these deductions when carefully analyzed have been lacking in scientific and substantiating facts.

To select the best procedure for remedying deviated septa, and the pathological conditions caused thereby, has been one of the most tangled problems in rhinology. Steele published in the St. Louis *Medical Courier* a description of a procedure which has been elaborated by subsequent workers; that is the crucial incision of the cartilaginous septum, breaking the cartilage and the vomer, and the use of substances to hold the parts in proper position until union takes place. Steele advocated a double crucial incision, making eight segments, but on account of the want of forceable and continued advocacy, and the many failures attending the attempts to perform the operation, the procedure was abandoned by nearly all operators until 1890, when Dr. J. Morris Asch performed it with modifications, additions and inventions of instruments. He has placed it among the most reliable, scientific and creditable operations of modern rhinology.

Bosworth has done much for the relief of nasal stenosis caused by deviations of the septa and concomitant thickening, by his able and forceable advocacy of removal of the thickened convex side. Roe has invented many valuable instruments and has accomplished much by his original work upon the septum, but few have been able to grasp and attain the high technical skill necessary for performing his many modifications of septal incision. Gleason in 1896 devised a skillful and unique operation upon the nasal septum, to be performed without ether and under cocaine anæsthesia. It consists of a crescentic or U-shaped incision of the cartilaginous septum, and in some cases the incision should extend into the bony part. In certain patients, where the deflection is confined to the cartilaginous part of the septum, and there is a condition or extreme deflection, this operation is to be specially commended on account of the readiness and ease with which it is performed. Where I have been careful in the selection of cases, I have secured most satisfactory results, with a minimum amount of annoyance to the patient.

It was an early recognized fact that the chief desideratum was to overcome the elastic and resilient tendency of the cartilage, and that this could only be done in certain cases by incision of the central parts and more or less complete dislocation of the cartilage from its bony articulation, the complete success of the operation depending upon how effectively these conditions can be obtained, and upon

proper maintenance of the parts in the position in which they are desired to remain ultimately. Since we have become cognizant of the latent elasticity of the cartilage, we are enabled to eliminate this deleterious factor by keeping the supports in position for six weeks or two months. Dozens of operations, which consist of some form of incision of the septum, have been described and urged by different operators, and each will accomplish curative results in a limited number of selected cases. I do not believe in confining oneself to any particular procedure. In those cases where the vomer and the perpendicular plate of the ethmoid and the triangular cartilage all are deviated, so as to touch the outer wall, the improved Asch operation is the best and only one which will be followed by approximately perfect results, save in cases resulting in perforation.

With a careful analysis of each class of septal cases (and there are hundreds of varieties), and with the knowledge we have obtained from Adams, Steele, Asch, Gleason, Bosworth and other able advocates, we will soon be able to say that in the department of operations for the septal deviations in the lexicon of rhinology there is no such word as fail.

Dr. Freudenthal: I would like to make a few remarks in regard to an ice-bag which I used effectively in hemorrhage. I have not observed severe bleeding after operations upon deflected septum but have experienced bleedings which lasted for several hours. I refer to an appliance which I recommend and which is a nasal-bag, an account of which I published a few years ago. This has helped me a great deal, but does not seem to be known generally. This bag is filled with ice and can be fastened around the patient's head. If the patient is in the sitting position we can operate just as well. In case of severe hemorrhage we can plug the anterior and posterior nares. This nasal ice-bag is a great help in stopping and preventing a bleeding. Two months ago I did an Asch operation, and when finished a colleague wondered if I had cut through the cartilage, as there were only two or three drops of blood lost. I recommend this simple instrument highly. I generally place it on the nose when the assistant commences the anæsthesia.

Dr. Quinlan said that whilst Dr. Myles' review of the history of improvements made by various men in the technique of the operation for deflections, deviations and spurs of the nasal septum, the speaker had failed to give due credit to Dr. Goodwillie for his valuable nasal intubator. He (Goodwillie) was probably the first operator who had devised such an ingenious instrument for maintaining the septum in the upright position after operations. Asch's method, how-

ever, seemed an ideal one, as the resiliency of the cartilaginous septum was weakened and the subsequent treatment by the splints of Mayer, held the vertical plane in the upright position until healing had taken place. During the past months (he) Dr. Quinlan has performed the Asch operation with the most gratifying results. The latter-day aspirants had failed to substantiate, as the methods of Asch had been tried and found true. Dr. Quinlan was satisfied that it was not the operation that had failed, but in many instances it was the operator.

Dr. William K. Simpson thought that as we gained additional experience with the Asch operation there were certain points that should be borne in mind, especially the one that Dr. Myles brought up, viz., that we should avoid any preliminary sawing operation until after the Asch operation, as by means of the tube a certain amount of absorption of redundant tissue takes place. The speaker emphasized the importance of knowing that the tube was in position on the floor of the nose. He had had two or three experiences where the main deviation had been high up, and, later, a second deflection was found low down. The tube was placed in after the main angle was broken, but instead of resting on the floor of the nose it rested on a ledge of tissue. This necessitated a secondary operation for removal of this ledge, the ledge forming a false floor of the nose. One can always tell by the direction of the tube if it is in the proper place. If it is straight and parallel with the plane of the septum it rests on the floor of the nose. An angle pointing toward the septum would indicate that the tube was not on the floor of the nose. Isolated pressure may be maintained by the use of Bernay's sponges at times where the tube cannot be used. These sponges swell from the absorption of moisture. He knew of nothing that could control post-operative hemorrhage like the presence of these sponges.

Dr. McKernon spoke of a case of secondary hemorrhage following the Asch operation which nearly resulted in death. The patient was well nourished, robust, and the ordinary Asch incision was made, and in addition to crushing up the cartilaginous septum, the bony septum, which was deviated, was also crushed and brought to the median line. There was no marked hemorrhage at the time, but four hours afterward there was bleeding from the mouth. Blood flowed through the posterior nares freely, but there was very little through the anterior nares on account of the pressure produced by the tube. The speaker removed the tube and tried to locate the hemorrhage, and he found it was coming from the posterior portion of the bony

septum, probably from the groove where the nasal artery passes through. He packed with iodoform gauze, but this did not control the hemorrhage at all. At the end of another half hour he removed this and packed again posteriorly; also the anterior nares were packed. This did not control the hemorrhage but a short time. He then left the case (during the interval while the hemorrhage had ceased) but was sent for in half an hour and found the patient in a state of collapse. He then did a transfusion with a normal salt solution, at a temperature of 106° F., which brought the pulse up. He removed the packings, both posteriorly and anteriorly, and irrigated with peroxide of hydrogen solution with good results. Finally he took a piece of iodoform gauze and made it the shape of a cone and stuffed it full of cotton wool and packed it in, pulling it down posteriorly, so packing it completely and controlling the hemorrhage. The hemorrhage was controlled but the patient was in a state of collapse and transfusion was done for the second time. The patient made a good recovery. He stated he believed it unsafe to break up the bony septum with the forceps.

In regard to the tube employed, he thought it was best to use a hollow tube, in order to give the patient a chance to breathe through it, and one without perforations, as these were easier to keep clean.

Dr. O. B. Douglas said he would like to have discussed the question, When does a deflected septum require operation? Some surgeons operate when there exists but a slight deflection, while others will operate only when there is an entire occlusion of the nostril. What degree of deviation necessitates an operation?

Dr. McKernon asked whether the previous speaker referred to the bony or the cartilaginous septum.

Dr. Douglas replied that he referred to any deflection which required operation.

Dr. Thomas J. Harris said he would like to speak a few words in regard to the work done by Dr. Tansley in two operations, following out the method reported by him at the last meeting. He confessed to have had a great deal of skepticism regarding the simple method of procedure when there was such a difficult condition to operate upon. Through the kindness of the doctor, two cases which he had the opportunity to see had been operated upon by this method. The results were excellent. This operation permits the use of cocaine only. We have always to bear in mind that to the patient, at least, ether is a source of dread. Again, if we can avoid breaking up the septum—only its necessary prostrating effects—it is a distinct gain. This the doctor claims to succeed in doing. The speaker had not

done this particular operation, but intended to do it. The doctor relieves the pressure on the septum by dissecting up from the sides two flaps of mucous membrane; he proceeds without the crushing operation, and he then makes pressure with the tampon. He does this after pushing the septum over; the tampon is left in four days or longer and there follows no unpleasant symptoms. In two cases the speaker had seen there had been a most total occlusion on one side. The concave side had been filled in with a perfectly straight septum.

The Chairman, Dr. Wright, said that before the paper on "Deviations of the Septum" was read at the January meeting of the Section, there were four cases operated upon by various methods in his clinic in Brooklyn. Two of these were done by the ordinary Asch method, one by the Roe method and the other by a combination of both methods. There followed very good results in all cases but one, and of that case he wished to speak. This patient was nineteen or twenty years of age, with a very much deflected and thickened septum. The bridge was broad and thickened, and the young man stated that his nose had been broken six times. The septum was very thick where it was joined to the nasal arch. In this case the Asch operation was performed. The septum was forced over to the median line and the tubes were introduced. From the sloughing of one of the flaps there resulted a bad perforation. Inside of six days this perforation was quite large. Gradually the condition began to look like a syphilitic nose. The young man denied any syphilitic history. He placed the patient upon iodide of potassium and the thickening of the septum and nose decreased. The perforation still exists in the septum. In spite of the history of the repeated accidents, he thought it was evident that the condition of infiltration was largely due to syphilis. The perforation was far back and there will probably be no trouble from it, but the deviation was not corrected.

In regard to the use of anæsthetics, he said that in all of those cases pledgets of cotton soaked in ten per cent cocaine were laid on each side of the septum, and subsequently a few drops of a four per cent solution of cocaine was injected beneath the mucous membrane. In three of the cases complete anæsthesia was obtained. In the Asch operation there was little pain, but in the Roe operation there was some pain in spite of the cocaine, although he did not think it was severe. In one woman, fifty years old, there was no pain felt.

In children it is perfectly easy to break up the septum, but the greatest difficulty is experienced in the after-treatment. The septum is very elastic and it tends to force the tube out. In these cases the

Roe method seems to be preferable. With preliminary antiseptic precautions, he plugs the nose with iodoform gauze, leaving it there four or five days, during which time the gauze usually remains sweet. The necessity of replacing the tube is avoided in these cases.

In regard to splints, we often have trouble with the Asch splint, especially in children. The speaker has sometimes used heavy rubber drainage tubes, which, after being introduced, held very well.

As to cutting into and breaking up the bony septum, the speaker did not feel like doing it.

In regard to the question as to when cases required operation, he thought it depended upon the symptoms. If the septum was but a little deflected, yet produced marked obstructive symptoms, that case should usually be operated upon, but even if there was total occlusion, and the patient had lived forty or fifty years without symptoms, he surely should live the rest of his life without operation.

Dr. Delavan remarked, with regard to certain varieties of spurs and exostoses of the nasal septum, that where the ridge was continuous and extended along the septum for a long distance backward, he thought it was sometimes a mistake to remove the whole of it at one sitting. In such instances the anterior part of the spur could first be taken away and, at a subsequent time, the rest could be operated upon. The removal of the anterior part of the spur gave a clear field for the second operation, which could be performed with greater accuracy and with far less shock to the patient.

The objection to this procedure was that two operations were necessary. Where indicated, however, its advantages were decidedly great.

The speaker called attention to a plan which he had employed for a number of years to keep apart opposed surfaces of the nose that were likely to become adherent after operation. He was in the habit of inserting between the wounded surfaces a small piece of India rubber gauze, by means of which the parts were completely separated, and the healing progressed very rapidly and without the slightest irritation.

Dr. Emil Mayer said that there were a few statements made which he wished to combat. First of all he wished to protest against the statement of Dr. Myles that the majority of deflections were caused by injury. This was not the case, in his opinion. He had seen a slight deflection become more and more pronounced until it was complete, in a case where adenoids were present, and an operation refused. Dr. Gleitsmann had read a paper on the influence of adenoids upon the septum, causing deflections, and the speaker cited a

recent case where the cartilaginous septum was very much thickened and where, after removal of adenoids, the hypertrophic condition had entirely subsided. In another case, a marked deviation exists in a five-year-old child. The adenoids have been removed and the septum will be most carefully watched to note any advance in the deviation.

This brought him to the question, How young a patient may one operate on safely? He, himself, had performed it upon a five-year-old boy with unqualified success, but he would say that seven years of age is about as young as one should ordinarily operate. This, however, is not because of the pain caused by the tube. It is remarkable how painless its extraction and introduction is. If pain is occasioned, there is something wrong with the tube. The boy of five would be seated in a chair, and in play, counting one, two, three, the tube was inserted.

Another objection must be entered against the statement that the Asch operation is a crushing one. It is not and never was so described, either by its originator or by the speaker. The forceps that are used are firmly pressed together, but no see-sawing is done with them.

The tubes answer every purpose in the vast majority of cases. If there is much posterior obstruction they are too long and hence are cut off for that particular case. So, likewise, if they protrude anteriorly, should the lower end be taken off.

The speaker was glad that Dr. Quinlan had mentioned Dr. Goodwillie. The latter was a pioneer in this work and he was the first to introduce any tube in the nose after operations. These tubes were of soft rubber and acted as irritants to the mucous membrane, and upon this the vulcanite tube was devised.

The question as to what is an operable case of deviation has been answered by the chairman and embodied the speaker's views.

In regard to the question of injuring the vomer, that would seem to be utterly impossible with the Asch scissors, if properly introduced.

In commenting upon two hundred successful cases operated upon by the speaker, he gave his preference for complete anæsthesia rather than local anæsthesia, believing that the results would be better and more gratifying to the patient as well as to the operator.

Dr. O. B. Douglas said he had used rubber tissue with excellent results, and he wanted to recommend it to the members of the Section. His method differs somewhat from the plan of Dr. Delavan. He first wound a flat applicator with cotton and moistened it with a

solution of aceto-tartrate of aluminum, then wrapped it about with several thicknesses of rubber tissue. This being introduced between the two granulating surfaces, might be retained for weeks without discomfort to the patient.

Dr. Beaman Douglass said there was something wrong with the splints; with this exception the operation was almost a perfect one. He thought McKernon's splint was better than the Asch splint, and of course the Douglass splint was all right. None of the splints were perfect, because they did not fulfill the conditions desired. The splint was yet to be invented which would give perfect support. Probably this perfect splint would spread intranasal and posterior when pressure was applied, somewhat like a fan spreads. This would support the septum evenly all over. It was a mechanical problem which, so far, he had been unable to solve. He thought the splints should be narrower than those in present use. Certain progress had been made along the line of septal operations. He referred to the Adams operation. Then came the question whether it was right to operate at all, because of bad or insufficient results. Then came the crushing operation. Then the bending by Adams' forceps. Then the Asch operation followed, which gave such excellent results. His own operation he did not like to speak about too much, but would like the members to try it. He had done it eighty or ninety times with regular success.

The speaker believed that deflections should be operated upon when they interfered with respiration. In regard to the danger from hemorrhage, he did not think it was great, and was very unimportant, except in a few cases. Whenever the deflection caused any symptoms which could be directly traced to it and not to other obstructions, as middle turbinate thickenings, etc., he thought the septum operation should be performed. If adenoids are an element causing trouble, remove them.

The doctor had made it a rule not to operate upon children under seven years of age. In regard to the anæsthetic used, he thought so much depended upon the patient's control. He preferred to give ether, because under it one could do better work.

Dr. Gleitsmann said he wanted to state an experience that might be of service to others. He said there were some cases where it was almost impossible to bring the patients under the influence of cocaine or eucaine. It occurred to the speaker that if he used cocaine and antipyrine, he could produce anæsthesia. He was successful. He used fifty per cent antipyrine and twenty per cent cocaine. This will produce anæsthesia where twenty per cent cocaine would not.

Technique and Sequelæ of Operation for Naso-Pharyngeal Adenoids.

Dr. Wendell C. Phillips continued the discussion on this paper (discussion adjourned from the previous meeting).

Those who teach in post-graduate schools of medicine are frequently asked to name the *best* instrument for a given operation and the answer is far too often a definite statement, naming one single instrument as the best, thus leading the student to consider all other instruments as of doubtful value. Statements like the above should be so modified that the student would receive the impression that a certain instrument had proven most useful in said operator's experience.

So in operations for the removal of adenoid or lymphoid tissue from the pharyngeal vault; various operators use various methods and instruments and accomplish about the same results. A few years ago, in this country, nearly all operators used the Hooper modification of the Lowenberg forceps. Then came the Gottstein curette, and later the various modifications of each, some of which have been useful and many positively bad. So far, these variations in shape, size and cutting character have been more marked in forceps than curettes, as the Gottstein, with his own notable modification, still remains the type. A few years ago, the heart-shaped modification was shown to this Section by Dr. Munger.

This was supposed to allow the sides to enter the choanæ. But as usually constructed, the chief cutting portion is at the depressed point at its upper portion, and every stroke would simply plow a furrow along the posterior wall, rendering but slight service and with a possibility of doing much harm.

The modification presented by Dr. Chappell, based, as he claims, upon the results of examination and measurements of a large number of cases, varies but little in shape from the Gottstein. It seems to be of somewhat lighter construction and the serrations upon the cutting edge may add to its cutting power. I have not used this instrument, but it would seem to me that unless used very gently it would severely lacerate the deeper tissues and oftener result in severe hemorrhage.

For several years I have in nearly all adenoid operations combined the forceps and curette, and experience has led me to believe that the most effective work can in this way be accomplished.

Inquiry among a number of the members of our Section has led to a belief that this plan is followed by a large proportion.

But few use forceps alone and but few the curette alone. It is to

be understood that reference is here made to the general run of cases. Special cases, such as very young children, may be put down as exceptions.

The forceps which, in my hands, has been most effective in removing the larger proportion of the mass, and at the same time avoiding many of the dangers to surrounding tissues, is the Brandegee.

A large proportion of the staff of the Manhattan Eye and Ear Hospital make use of it for the removal of the main mass, but nearly all employ the curette and finger to complete the work. I have found the small curettes devised by Dr. Coffin to be very serviceable in reaching those masses of tissue often found high up on either side of the septum and not readily grasped by either forceps or curette. It would seem almost to be an axiom that the combination of forceps and curette will be more effective, in the majority of cases, than either alone.

Dr. Kenefick's fatal case will certainly serve as another danger signal and can but lead to greater care in the management of our adenoid operations. I have long believed that patients should remain in bed for from twenty-four to forty-eight hours following an adenoid operation, and for this reason I long ago made it a rule to perform those operations at the patient's home rather than in the office. It is also a wise precaution to have the services of a trained nurse, when possible.

The Manhattan Eye and Ear Hospital is not alone in having established a rule that these patients should remain in the hospital after operations; other hospitals, notably the New York Eye and Ear Infirmary, do the same. It is also important that the anæsthetic should be administered by one who has had experience in these special cases. Adenoid subjects, as a rule, bear ether badly. Some operators habitually douche the naso-pharynx with peroxide of hydrogen after the operation. An unpleasant experience with its use, several years ago, led me to look upon it as somewhat dangerous. In the case referred to, the peroxide of hydrogen, coming into contact with the blood in the naso-pharynx, formed a large clot, which was sucked into the larynx, requiring very rapid effort, even to hanging the patient downward by the heels, to prevent strangulation. There is no necessity for its use, except, possibly, in cases accompanied by severe homorrhage, when the patient should be placed upon the side, to allow drainage from the mouth.

Dr. Kenefick's case plainly shows the importance of making careful inquiry as to hemorrhagic tendencies, and it should also serve to check indiscriminate operating by those who have not had the requisite training.

There are other tissues than adenoid, in the pharyngeal vault, and the removal of the adenoid tissue is sufficient without scraping everything away to the bone. In this connection it may be urged that the forceps are less apt to lead to this result than the curette.

Dr. Quinlan said he had a specimen which showed the results of a forceps operation, not that he wished to undervalue the curette, but that in a great many instances the curette does not do the work, especially if the adenoid is fibrous. In the case just presented, you can see the great quantity of tissue that has been removed from the vault of this man's pharynx. Now, this patient was operated on about one week ago, under ether, and the operation done according to up-to-date methods. I was informed subsequently that my patient was treated by a distinguished specialist of this city, about a year ago, and that a large piece of the pharyngeal tonsil was removed by the curette, under cocaine, at that time. I think we often do ourselves an injustice by attempting operative procedures in this light manner; we are unjust to ourselves and our patients—these operations should have the significance that they require, and it behooves us not to treat conditions too lightly—the speaker thinks this operation should be done under an anæsthetic and the vault thoroughly cleansed of all this offending tissue.

Dr. Beaman Douglass spoke in regard to the recurrence of adenoids. He thought that about three in one hundred cases return in the course of one year. He thought in these cases there was a diathesis toward the lymphoid growths. You remove these adenoids thoroughly and they again return. The reason was that the adenoids grew from the submucous layer of the membrane, and, since the surface of the membrane is only scraped or removed, the growth might recur.

In his own experience the best method combined the use of the forceps and the curette. There really was but little choice if the operation was done thoroughly and carefully. He used the Gottstein curette. Still about three per cent of the cases of adenoids recurred inside of one year.

Dr. Simpson referred to a case of secondary hemorrhage which might act as a guide to us. It occurred in a young girl, about thirteen years of age, who had menstruated once previous to the operation. The operation for adenoids was done a few days before menstruation, without inquiry as to the time of menstruation. As that time approached she had a violent secondary hemorrhage. Examination showed that the wound had not entirely healed. The speaker thought it was a wise precaution to inquire in regard to the

time of menstruation, and to operate on girls soon after rather than before the period. He further suggested the propriety of making an examination for Klet-Lœffler bacilli before operation, so as to avoid subsequent diphtheria in the wound.

Dr. McKernon referred to the case of secondary hemorrhage, following adenotomy, reported by Dr. Knight at the previous meeting, in which he thought the death was due to sepsis. He saw the case twenty hours previous to the death, and at that time the temperature was 103°, pulse 140°, and there was a distinct odor from the pharynx of the child, and it presented every evidence of being septic. Sepsis, and not hemorrhage, he thought to be the cause of death. He did not think it should go on record as a death due to secondary hemorrhage.

Dr. Mayer said: The subject under discussion being post-operative hemorrhage, he would like to present a brief clinical note as having much bearing upon this matter. A boy, aged seven, was brought to his office with a very large right tonsil. His mother, who accompanied him, stated that she feared any cutting operation, because every member of her family bled very readily and very long. He, accordingly, used the galvano cautery, and in about seven applications had reduced the tonsil to one-sixth of its former size.

A short while ago he met the mother of his patient and she stated that she had undergone an operation for hemorrhoids, and had informed the surgeon of her family tendency. He operated, and on the tenth day she had so alarming a hemorrhage as to require much time in checking it and thoroughly exsanguinating her.

The lesson this teaches is to refrain from operative procedures when hemorrhage is a family peculiarity.

Dr. Kenefick said he did not take that view of the case. If one of the gentlemen present had seen the case on the day of the operation the question would not have come up. There was already marked and profound anæmia on the same evening following the operation, which made it appear as though the child could not live anyway. In these cases of hemophilia gangrene sets in early. The odor, etc., was noticed about the nose; the reason was because the plug was placed in on Tuesday night and was not removed until Thursday noon. Sepsis could occur when the child was completely prostrated by the severe hemorrhages.

Dr. Phillips asked if the temperature had been taken before the operation.

Dr. Kenefick answered that he did not know.

Dr. Gleitsmann spoke of a case of secondary hemorrhage that took

a favorable course. He used post-nasal forceps and the Gottstein curette, and he cut a little too far laterally near the Eustachian orifice. This was followed by a severe hemorrhage, which was controlled by iodoform gauze. He advises against cutting too far laterally.

BOOKS AND PAMPHLETS RECEIVED.

Text-Book of Otology. By Dr. L. Jacobson, Berlin. Second revised German edition. In one octavo volume of 520 pages, 330 illustrations, 19 full-page plates. George Thieme, Leipzig, publisher. American agents, Lemcke & Buechner, New York.

Acute Empyema of the Frontal Sinus, with Report of Cases. By Ralph J. Wenner, M.D., Cleveland, Ohio. Reprint, Cleveland Journal Med., April, 1898.

The Treatment of Chronic Suppurative Otitis Media. By Norval H. Pierce, M.D., Chicago. Reprint, N. Y. Med. Jour., March 12, 1898.

Pharyngitis Herpetica, Associated with Menstruation. By Lewis S. Somers, M.D., Philadelphia. Reprint, Philadelphia Med. Jour., Feb. 26, 1898.

Diseases of the Singing Voice, Causes and Treatment. By Prof. Dr. H. Krause, Berlin. 32-page, 12 mo. pamphlet. German. Published by August Hirschwald, Berlin, 1898. American agents, Lemcke & Buechner, New York.

Turbinectomy, or Resection of the Middle Turbinate. Report of one hundred and twenty operations. By J. A. Stucky, M.D., Lexington, Ky. Reprint, THE LARYNGOSCOPE.

A New Nasal Speculum. By Emil Amberg, M.D. Reprint, Monatschrift fuer Ohrenheilk, 1898, No. 1.

Die Syphilis der Oberen Luftwege unter Besonderer Berucksichtigung der Differentiellen Diagnose und der Lokalen Therapie. By Anton Lieven, Aix-la-Chapelle. Part I.—Syphilis of the Nose. Haug's Klinische Vortræge, Vol. xx., No. 10. Published by Gustav Fisher, Jena, 1898. American agents, Lemcke & Buechner, New York.

Intubation with Improved Instruments. By Max Thorner, A.M., M.D., Cincinnati. Reprint, Cincinnati Lancet-Clinic, Feb. 19, 1898.

The Truth about Cigarettes. A pamphlet containing reprints of papers read before the Medico-Legal Society of New York. Dec., 1897, March, 1898. Dr. Clark Bell, editor, 39 Broadway, New York.

NEWS ITEMS.

An International Directory of Laryngologists and Otologists.

A Directory of above title is announced for publication in June, 1898, under the auspices of *The Journal of Laryngology*. The managing sub-editor will be glad to receive the names and addresses of all physicians limiting their practice to Laryngology, Rhinology and Otology.

Address all communications to Dr. Richard Lake, care of Rebman & Co., 11 Adam street, London, W. C., England.

The Monthly Cyclopedia of Practical Medicine.

The *Monthly Cyclopedia of Practical Medicine* will in the future be the companion publication of the Annual of the Universal Medical Sciences, the *Universal Medical Journal* being discontinued. Dr. Charles E. Sajous, the editor, has an article in the first number on the treatment of cancer by interstitial injections of alcohol. He inclines to the belief that alcohol will be found a valuable remedy, and at least merits a faithful trial.

American Text-Book of Diseases of the Eye, Ear, Nose and Throat.

Mr. W. B. Saunders announces that the *American Text-Book of Diseases of the Eye, Ear, Nose and Throat* will be issued early in June.

A Review of the Work in Otology During 1897.

Dr. H. A. Alderton, of Brooklyn, N. Y., announces that he has in preparation a "Review of the Work in Otology During 1897," on the plan of Blaus' similar work in German. This "Review" will consist of a thorough resume of all published otological writings in 1897. It is the desire of the editor to arrange this work as a ready reference volume, a Year-Book of Otology. Authors of articles, who have not already responded, are asked to forward reprints of all articles published by them in 1897.

American Laryngological, Rhinological and Otological Society.

The fourth annual meeting of the American Laryngological, Rhinological and Otological Society will be held in Pittsburg, Pa., on May 11th and 12th, 1898, under the presidency of Dr. W. H. Daly, of that city. This is the general meeting of the whole society.

New Publications.

Lea Bros. & Co. announce the following for early publication:

"A Manual of Otology." By Gorham Bacon, A.M., M.D., Professor of Otology in University Medical College, New York. With an introductory chapter by Clarence J. Blake, M.D., Professor of Otology in the Harvard Medical School, Boston, Mass. In one handsome 12mo. volume, with numerous illustrations.

"Diseases of the Nose, Throat, Naso-Pharynx and Trachea:" A Manual for Students and Practitioners. By Cornelius G. Coakley, M.D., Professor of Laryngology in University College, New York. In one volume, 12mo., of about 400 pages, with numerous illustrations, many of which are in colors.

Married.

We are pleased to announce that our co-worker, Dr. George H. Stubbs, of Birmingham, Ala., has joined the ranks of the Benedicts. He was married April 12th to Miss Mary Adele, daughter of Gen. and Mrs. Edmund W. Rucker. THE LARYNGOSCOPE adds its congratulations.

Announcement.

Dr. Herbert W. Hoyt, of Rochester, N. Y., desires to announce that he has returned from a course of study in New York and Europe, and will hereafter confine his practice to the diseases of the nose, throat and lungs.

The "Memphis Lancet."

This is a new aspirant in the large field of medical journalism, but there is "plenty of room on top." Our personal acquaintance with the activity and attainments of several members of the staff of our new contemporary permits us to predict for it a very bright future. The journal will begin publication July 1st, 1898. We wish our Memphis friends much success.

Pen and Photo.

The picture of Dr. Fayette C. Ewing adorns the cover of the *Dietetic and Hygienic Gazette* for April, and the leading article is from the doctor's pen—"The Hygiene of the Ear: In Health and Disease."

SYR. HYPOPHOS. CO., FELLOWS

Contains the Essential Elements of the Animal Organization—Potash and Lime;

The Oxidising Agents—Iron and Manganese;

The Tonics—Quinine and Strychnine;

And the Vitalizing Constituent—Phosphorus; the whole combined in the form of a Syrup with a **Slightly Alkaline Reaction.**

It Differs in its Effects from all Analogous Preparations; and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has Gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, ***finds that no two of them are identical,*** and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, ***in the property of retaining the strychnine in solution,*** and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. ***Fellows.***"

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

Medical Letters may be addressed to:

Mr. FELLOWS, 48 Vesey Street, New York.

REASONS WHY YOU SHOULD SUBSCRIBE FOR

THE LARYNGOSCOPE:

BECAUSE—It is the only regular Monthly Journal published in America exclusively devoted to the diseases of the Nose, Throat and Ear.

BECAUSE—It is the Official Organ of three of our Representative Special Medical Societies.

BECAUSE—It is managed by a live editorial staff, and free from the influence of any clique, school or society.

BECAUSE—It contains more original matter than any journal published representing these specialties.

BECAUSE—It always enjoys the contributions and endorsements of the best and ablest specialists in the profession.

BECAUSE—Its list of contributors contains more prominent names than that of any special journal of its kind.

BECAUSE—It will keep you informed of the progress of the world in this trio of specialties.

BECAUSE—Its popularity has been recognized abroad, and it is now being published simultaneously in America and Great Britain.

.....1898.

Publishers "THE LARYNGOSCOPE" (*Devoted to Nose, Throat and Ear Diseases*):

P. O. BOX 787, ST. LOUIS, MO.

Please enter my name as a subscriber for "THE LARYNGOSCOPE"

for one year from .....*1898.*

Enclosed find $2.00.

.....*M. D.*

No......*Street.*

.....*City*.....*State.*

In remitting kindly send New York, Chicago or St. Louis draft, post-office money order or express money order, or add 15c. to the amount sent, in order to pay cost of collecting check. THE EDITORS.